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THE AMERICAN *School Board Journal*

A PERIODICAL OF SCHOOL ADMINISTRATION



VOLUME 112, NUMBER 2

FEBRUARY, 1946



**with Victor exclusive
Spira-draft Lamp house**

The Animatophone—
16mm Sound Projector—
First in the Field



During projection, lamps get hot . . . very hot. But in the Animatophone this condition is anticipated and alleviated with Victor's exclusive *Spira-draft* lamp house. In the Animatophone the cooled air is forced in a spiraled, all-over, fast-moving stream through a multiple wall to dissipate heat more efficiently.

Result . . . longer lamp life, clearer pictures. And remember, on the VICTOR, the lamp has a standard base, obtainable anywhere, at no extra cost.

Here's another outstanding feature that gives the Victor Animatophone its leading position in the 16mm industry.

Victor Animatograph Corporation

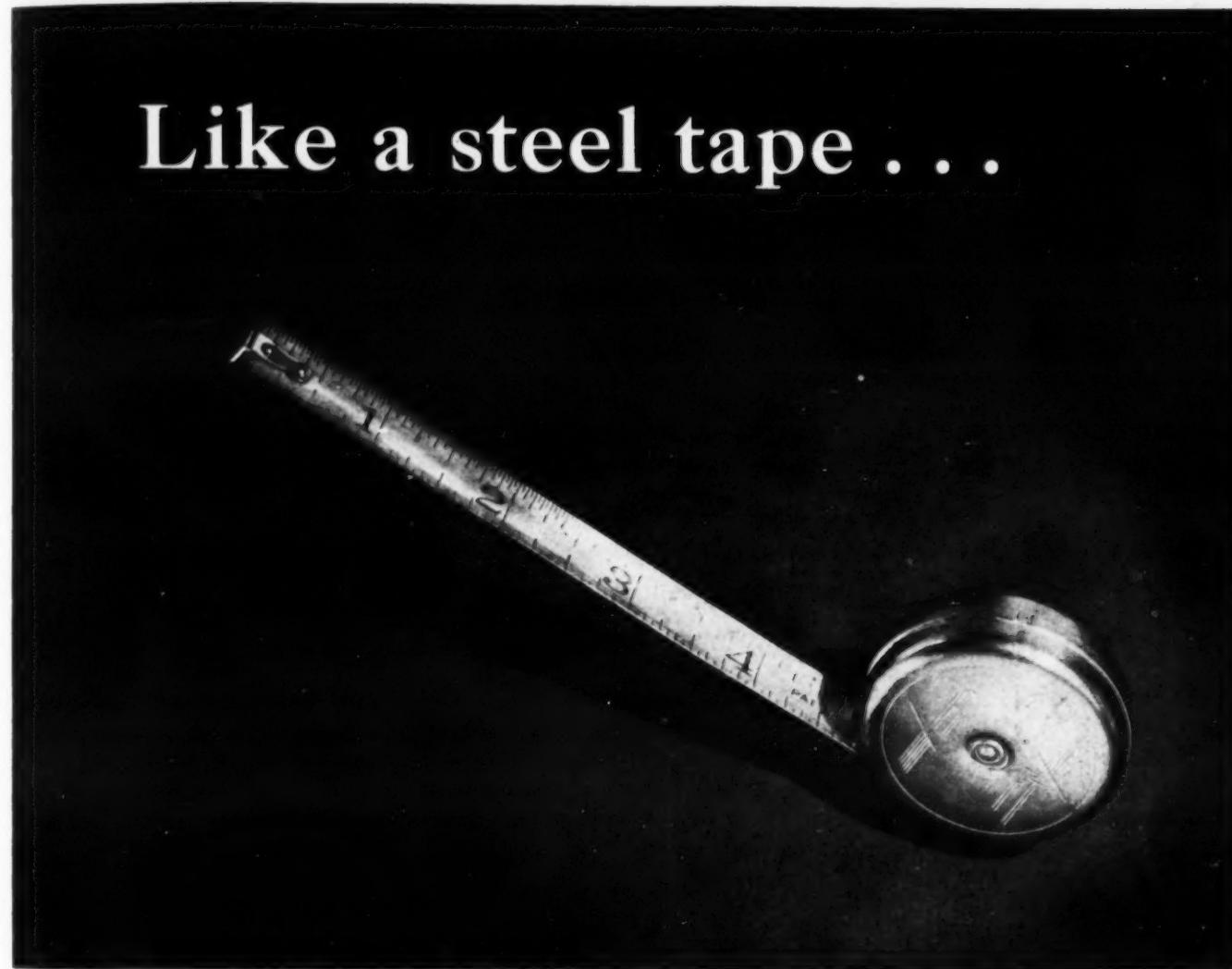
Home Office and Factory: Davenport, Iowa
New York (18) McGraw-Hill Bldg., 330 W. 42nd St.—Chicago (1) 188 W. Randolph
MAKERS OF 16MM EQUIPMENT SINCE 1923

February, 1946

SCHOOL BOARD JOURNAL

1

Like a steel tape . . .



The Royal never needs adjustment



Because there's nothing to adjust

The *only* Flush Valve which eliminates regulation or adjustment is the ROYAL. Its simplicity of engineering design, *plus* precision manufacture, insure accurate and lasting performance.

More than 4 million ROYAL Flush Valves are in daily service—including thousands of the first ROYALS installed over 36 years ago.

The ROYAL is "standard equipment" with discriminating builders and owners throughout the country. In fact, entire school systems, hotel chains, hospitals, industrial institutions, etc., use ROYALS exclusively.

For the best in Flush Valves specify Sloan—remember, there are more Sloan Flush Valves sold than all other makes combined.

SLOAN VALVE COMPANY
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February, 1946



ELECTROMATIC

IBM ANNOUNCES

the 1946 Electromatic Typewriter, which produces letters of distinguished appearance, with a minimum of physical effort on the part of the operator.

It is now on display in IBM offices in all principal cities throughout the country. We will be glad to furnish you with full information upon request.

INTERNATIONAL BUSINESS MACHINES CORPORATION

World Headquarters Building, New York 22, N. Y.

TYPEWRITER



HOW
DOES

Music

DEVELOP COMMAND OF Fundamental Processes?

ONE OF THE BASIC OBJECTIVES OF EDUCATION

Music study actually stimulates the "growth" and strengthens the "muscles" of thinking.

Reading notes, fingering an instrument, watching the director—simultaneously and on time—such mental and physical coordination develops command of the fundamental processes.

Have you thought seriously of music practice, playing in groups, a band or an orchestra, from the standpoint of its educational value, aside from music training itself?

In a little 16-page booklet, Pan-American has published a free discussion of this subject. You will be interested in reading it because it sets forth clear, concise truths in the unprejudiced manner School Executives like. May we send you a copy, with our compliments? Either the coupon below or a post card request will bring the story at once. Make it a point to send for it, today.

**PAN-AMERICAN
BAND INSTRUMENT CO.**

DEPT. 266, PAN-AMERICAN BLDG.
ELKHART, INDIANA

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PAN-AMERICAN BAND INSTRUMENT CO., Elkhart, Indiana
Gentlemen: Please send me without any obligation on my part, a free copy of your new booklet, "Music, and the Basic Objectives of Education."

Name _____ Position _____
School _____
Address _____
Town _____ State _____

THE AMERICAN SCHOOL BOARD JOURNAL, February, 1946, Vol. 112, No. 2. Published monthly by The Bruce Publishing Co., Milwaukee 1, Wis. Entered as Second-Class Mail Matter in the Post Office at Milwaukee 1, Wis., under Act of Congress of March 3, 1879. Subscriptions—In the United States and Possessions, \$3.00 per year; in Canada, \$3.00 per year. In Foreign Countries, \$4.00. Single copies, 35 cents.

Practically indestructible — made of plastic impervious to acid in ink.

No parts to separate and become lost or broken—lid is hinged into body of inkwell.

No glass inset to break.



Illustrated here is type No. 48.
No. 49 is without flange.

Sengbusch Noiseless School Inkwells

eliminate breakage and
replacement costs . . .



Guard before inserting
The guard holds the inkwell firmly in place and prevents it from being pushed out of the desk by books.

Guard after inserting



Two popular styles made for your present desks...

The experience of hundreds of Sengbusch-equipped schools shows that Sengbusch Noiseless School Inkwells help solve your inkwell problems these three ways:

1. They resist all destruction common with many other school inkwells, thus eliminating replacement expense.
2. They minimize ink evaporation, to cut down supply costs.
3. They eliminate annoying, costly ink-stain damage.

Sengbusch Noiseless School Inkwells are available in two styles designed to fit the majority of holes now in desks—for flush-type or protruding-type installations. Easy to install with or without guards. Easy to clean. No corrosion, deterioration, or crumbling.

Equip your desks with Sengbusch Noiseless School Inkwells. The worthwhile savings you enjoy back up your good judgment. Write today for descriptive price list.

Sengbusch Self-Closing Inkstand Co.
926 Sengbusch Bldg. Milwaukee 3, Wis.

B-1

For teachers' and office desks . . . Sengbusch Handi-Pen Desk Sets



Everyone in your school system who writes—superintendents, principals, teachers, clerks—appreciates the effortless performance of Handi-Pen. You just pick it up and it writes. Uniform penning. No flooding. No inky fingers. Less refilling—holds up to a year's supply of ink without evaporation waste. Attractive models from \$3.00 to \$12.00.

Write for free circular.

Available again -
Mimeograph duplicators



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LOOK TO CRANE FOR PROPER SANITATION EQUIPMENT

To anyone interested in the development of the youth of our nation, proper sanitation is important. Adequate facilities, properly installed, not only mean much to health and efficiency, but play a vital role in promoting good habits of bodily care and sanitation that are reflected in later life.

Crane school plumbing is designed to meet the requirements of all schools and possesses the sturdy construction so essential in equipment intended for public service.

Whether you need plumbing for replacement or for the new school you are planning to build, consult your Plumbing Contractor or nearest Crane Branch. They can help you with your selection and schedule your order for delivery as soon as manufacturing conditions permit.

CB-11-384. Rapidway blowout closet with elongated rim. Concealed flush valve and black hard rubber seat. Wall type permits easy cleaning of floors.

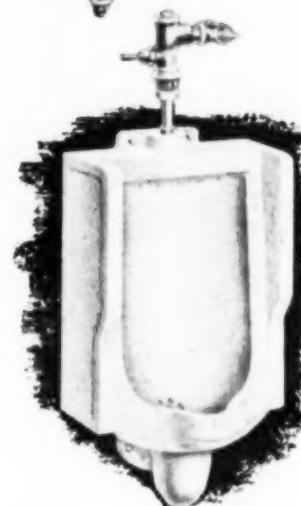


CB-15-605. Correcto urinal. Easily cleaned vitreous china. Integral strainer and trap. Can be arranged in batteries for flushing with single tank.

CB-9062. Corwith vitreous china wall drinking fountain. Sanitary angle stream jet with automatic stream regulator. Vandal-proof base.



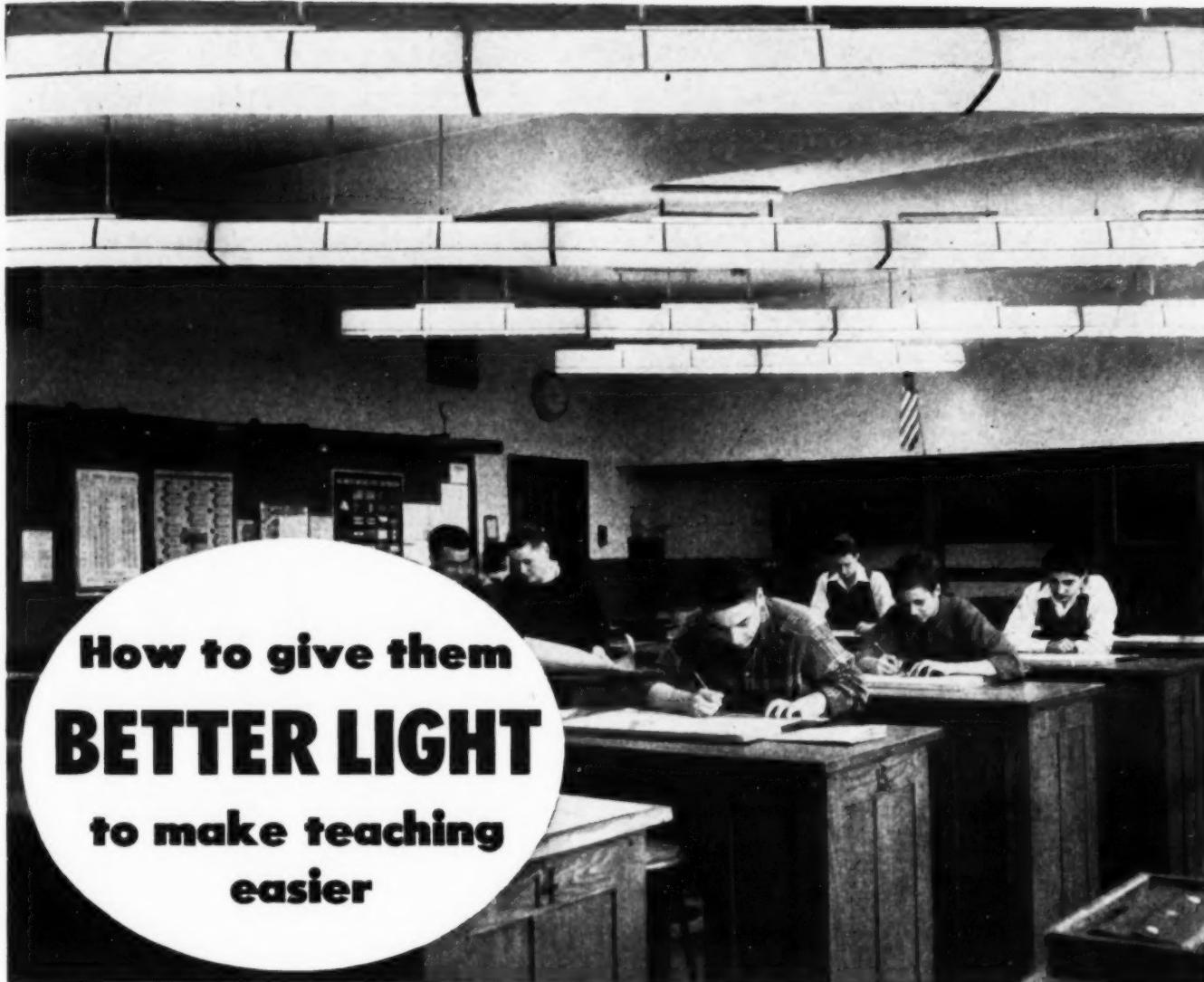
CB-754. Norwich vitreous china lavatory—with concealed banger. Rectangular basin, soap depression. Size: 20 x 18 and 24 x 21 inches.



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PLUMBING • HEATING • PUMPS
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CRANE

NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS



**How to give them
BETTER LIGHT
to make teaching
easier**

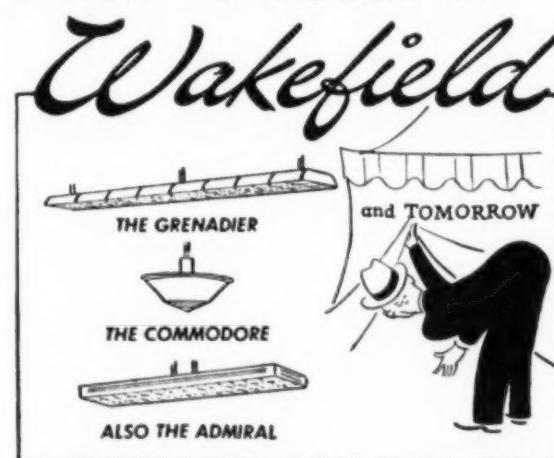
Wanted: Light for the drafting room of the Pontiac VOCATIONAL SCHOOL, Pontiac, Michigan, that would help pupils learn faster and make the close eye work of drafting easier, less strain.

Problem: Providing high level, overall lighting, with good distribution on walls and ceiling for greater eye comfort . . . despite the interference of large beams on the ceiling.

Solution: Lighting engineers of the Consumer's Power Company produced a practical and effective answer—continuous rows of Wakefield GENERALS (G-260) mounted diagonally to the drafting tables. This gives good shadow control, and the open top and plastic sides help provide comfortable light distribution, with 52 foot-candles on drafting boards. In this 26 by 40' room with 12' ceiling, 19 units are used, each with two 100-watt fluorescent lamps. Mounting height 10' above the floor.

Lighting rooms in your school may require different treatment, different equipment. But you can be sure that Wakefield will be glad to work with you in securing engineered lighting to fit your needs. The F. W. Wakefield Brass Co., Vermilion, Ohio.

ARE YOU THROWING AWAY DOLLARS? Proper lighting maintenance—cleaning fixtures and walls and relamping—can double or triple your lighting. Get the light you pay for—keep lighting equipment clean!





**ANYSTREAM SELF-CLEANING SHOWER HEAD
NOW AVAILABLE
FOR PROMPT DELIVERY**

In new construction or in modernizing, no shower is at its best unless it has a Speakman Anystream Shower Head. Here's a shower that's built for years of unmatched service. With a turn of the adjustment handle the user may adjust the spray at will.

There are no annoying "hollow spots" in the Anystream spray. Nor will an Anystream become a "squirter" producing a scattered spray pattern—the self-cleaning feature keeps it from clogging.

Use Anystream Self-Cleaning Shower Heads to keep new installations up-to-date...and to rejuvenate old shower baths. For homes, hotels, apartments, schools, hospitals and institutions.

Speakman Showers and Fixtures are distributed nationally through plumbing wholesale supply dealers and plumbing contractors.

A condensed catalog of Speakman Showers and Fixtures is listed in Sweet's Architectural File.

SPEAKMAN
SHOWERS AND FIXTURES
"The best in brass since 1869"

SPEAKMAN COMPANY, WILMINGTON 99, DELAWARE

3 SHOWERS IN 1



1 REGULAR SPRAY
Relaxing, soft, satisfying.



2 NEEDLE SPRAY

Just turn the adjusting handle a quarter-turn and you have a tingling, invigorating needle spray.



3 FLOOD SPRAY

Another quarter-turn and you get a no-splash rinse.



NEVER THIS—No squirt, no dribble with an Anystream Head. The self-cleaning feature keeps the spray full-flowing and free of "hollows" and "dry spots."

GET SET...NOW!



for early delivery on...

MEDART TELESCOPIC GYM SEATS

your order will put you on our "first-come-first-served" list...no deposit necessary.

Medart's engineering and planning facilities are available to you now...without obligation. By placing your order now, you will insure yourself earliest possible delivery the moment manpower and materials are available. In accordance with Medart's long standing policy of fairness your order will, of course, be cancellable should later conditions void or alter your requirements.

• 100% MEDART MADE!

Medart Telescopic gym seats are NOT an assembled product. All parts (metal and lumber) are fabricated, finished, assembled (and tested) at the Medart Plant. Hundreds of Medart installations all over the country attest the long life and safety of Medart installations.

COMPACT! TAKES UP ONLY
32 INCHES of FLOOR SPACE
WHEN "TELESCOPED!"

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to Medart "floating locomotion." Two types: wall attach-
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Stairway to Safety

Alundum Stair Tile Guarantees Permanent Non-slip Surface

For new schools to be built or old schools being renovated Norton Company recommends its ALUNDUM Stair Tile (and Floor Tile). This product was developed for a specific purpose: to overcome both the slipping hazard and the excessive wear of stairs, ramps and floors subjected to severe foot traffic. Walkways will always be safe — even when wet — where ALUNDUM Tile is used. No amount of traction will smooth its surface, reduce its non-slip protection. As for wear — ALUNDUM Tile installations have given more than 25 years of service under most strenuous conditions.

NORTON COMPANY

Worcester 6, Massachusetts



Schools are cleaned BETTER — and at LESS COST... with EXIDUST centralized vacuum cleaning systems

Janitors have an easier job in schools equipped with EXIDUST centralized vacuum cleaning systems. With an EXIDUST vacuum producer in the base-

ment, one janitor in a large school can often do the work of several men pushing portable cleaners . . .

Your janitor simply plugs one end of a long flexible hose into a conveniently located wall-outlet on the floor he is cleaning, and runs his cleaning tool over the walls, floors and furniture. Dust and litter on all exposed surfaces — be they bookcases, laboratory benches, or any other school equipment — are swiftly collected and deposited for quick disposal in the boiler-room receptacle.

Your investment in an EXIDUST centralized cleaning system pays for itself in a few years by savings in labor costs. Operating costs are low. Maintenance expense is negligible. And our records show that our equipment usually serves for about twenty years.

There are EXIDUST installations in every state. A letter from you will bring one of our engineers to advise you on the most economical type of EXIDUST system for your school.

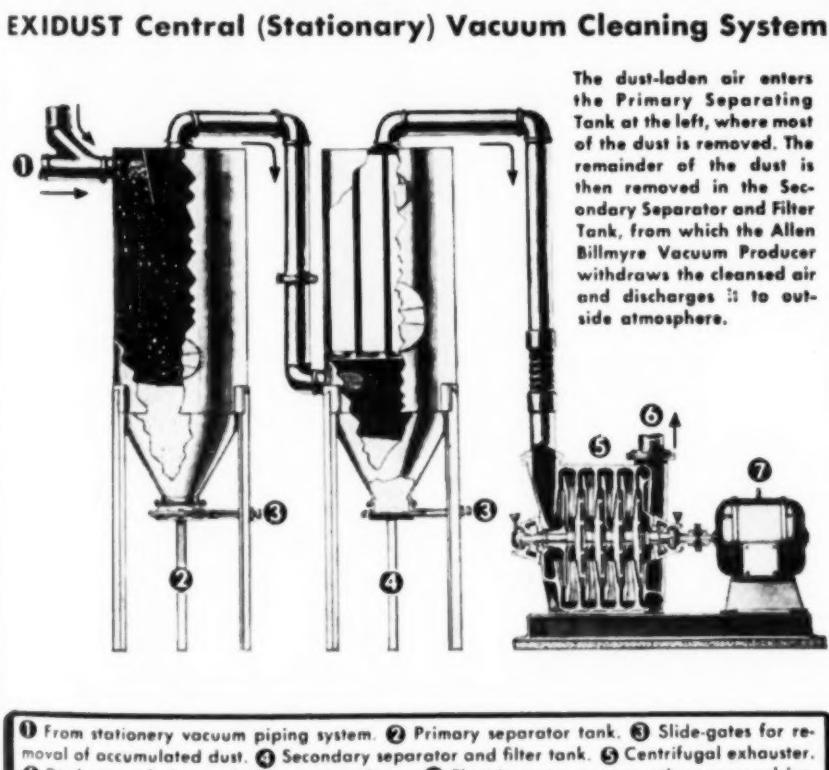
Write for complete details — today.

EXIDUST central (and portable) vacuum cleaners are manufactured by

ALLEN BILLMYRE COMPANY

487 Fayette Ave., Mamaroneck, N. Y.

AB-823



- ① From stationary vacuum piping system. ② Primary separator tank. ③ Slide-gates for removal of accumulated dust. ④ Secondary separator and filter tank. ⑤ Centrifugal exhaust. ⑥ Discharge of cleansed air to atmosphere. ⑦ Electric motor or any other power drive.

An EXIDUST Central Vacuum Cleaning System consists of 4 Units:

- Ⓐ Powerful Centrifugal Exhauster especially built for heavy duty vacuum cleaning. It provides thorough cleaning suction at low operating and maintenance cost.
- Ⓑ Separating Tank System which filters dirt and dust particles from the vacuum line and discharges only clear air through Exhauster into the outside atmosphere.
- Ⓒ Stationary Piping System with conveniently located Vacuum Outlets throughout area to be cleaned. One or many workers can clean simultaneously.
- Ⓓ Variety of Cleaning Tools and Flexible Suction Hoses with which dust and dirt are easily and thoroughly vacuumed to Piping Outlets and thence to Separating Tank System where it is collected.

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HEAVY DUTY VACUUM CLEANERS

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THE FIRST STEP

A good schoolhouse architect, due to his knowledge of school-housing requirements and experience, will effect many economies and provide the essential facilities for each particular project. The first step in every project is the employment of a good schoolhouse architect or the retention of his specialized services as a consultant.

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CHARLES W. MULFORD, Prop.
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A Superior Agency for Superior People
We Register Only Reliable Candidates
Services Free to School Officials
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*"For my money, I'll take
G-E Fluorescent Lamps!"*

You'll find that G-E Fluorescent Lamps are ideal for school lighting, especially in classrooms and hallways. In scientifically shielded fixtures, they'll provide plenty of light to protect young eyes, and to minimize shadows and glare . . . the kind of light that speeds seeing and learning.

Ask your G-E Lamp supplier to show you how G-E Fluorescent Lamps and the many other new G-E Lamps can bring your lighting to life!



G-E Fluorescent Lamps, most widely used in daylight white, soft white. Popular 40-watt size \$.95, 100-watt size \$2.15. Other standard sizes and colors available. All prices plus tax.

★ ★ ★

The constant aim of G-E Lamp Research—to make G-E Lamps Stay Brighter Longer, is important to the welfare of more business people every day.

G-E Lamps give "more for your dollar" because the ingenuity of G-E Lamp research has contributed *most of the major lamp improvements* for more than 50 years. Here are just a few improvements: inside-frosted lamps, gas-filled lamps, moisture-free gas, non-sag filaments.

G-E LAMPS

GENERAL  ELECTRIC



PORTRAIT OF A *Fireproof* SCHOOL

THIS SCHOOL, like most modern buildings, was considered fireproof! Every precaution had been taken in the design of the building and the selection of materials to assure safety against fire. What those responsible failed to consider was the *contents* of a school — supplies, furniture, waste accumulation, cleaning materials, fuel . . . all combustible! It is the failure to set up adequate protection against fires starting in these combustible contents that results in 5 school fires every day in the U. S. with accompanying loss of life and property.

FORTUNATELY there is a means available for safeguarding the lives of school children and also valuable school property against fire. A Grinnell Automatic Sprinkler System will stop fire *anywhere* in the building, at *any time* and *automatically*.

YOUR RESPONSIBILITY for the *dependable* protection of young lives and valuable property makes it imperative

that you realize that fireproof construction alone is not sufficient.

A **GRINNELL ENGINEER** will help you survey the danger spots in your schools and show you how they can be protected. Write or call the Grinnell office near you. There's no obligation. Grinnell Company, Inc., Executive offices, Providence 1, Rhode Island.



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AUTOMATIC SPRINKLER FIRE PROTECTION

FOUNDED 1852
DEVOTED TO THE DEVELOPMENT OF AUTOMATIC FIRE PROTECTION SINCE 1873 . . . PROTECTING OVER FIFTY BILLION DOLLARS WORTH OF THE WORLD'S PROPERTY

**This
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**on Heating Equipment and Plumbing Fixtures
assures long, low cost, trouble-free service**



... and means better health, greater comfort for pupils and teachers

LIKE the "Sterling" mark on silver, the American-Standard Mark of Merit on heating equipment and plumbing fixtures stands for the very finest. It identifies time-tested, performance-proved products backed by millions of dollars spent in research.

Designed and engineered for long, efficient, economical operation, American-Standard products for schools have been serving the Nations' Health and Comfort for more than half a century.

Whatever your modernization, expansion or new construction plans ... whether you need a single drink-

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venient FHA Time Payment Plan.

For information, consult your Architect or contact your Heating and Plumbing Contractor. **American Radiator & Standard Sanitary Corporation**, P. O. Box 1226, Pittsburgh 30, Pennsylvania.

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HEATING PLUMBING

Serving the Nation's Health and Comfort



with

NATIONAL LOCK COMBINATION SHACKLE LOCKS

- 1
- 2
- 3
- 4

Designed and ruggedly built for long life and maximum protection to school lockers.

Heavy plated case — double weight, steel construction for protection against abuse.

Smooth operating, precision made lock mechanism, assures dependable service.

Heavy 5/16" diameter shackle. Black enameled dial with white numerals and graduations.

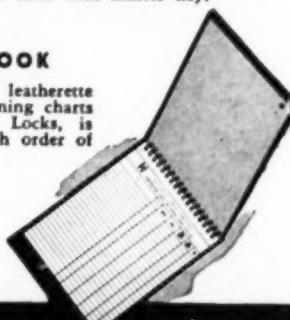
AVAILABLE IN TWO POPULAR STYLES

No. 68-265 (at right). A heavy duty lock, requiring three number dialing to open. When shackle is inserted into case, combination is disarranged and lock must be redialed to open. Dial is locked against rotation when shackle is open.

No. 68-264 (at left). Same top quality construction as above, except with master key feature. Student uses dial to open lock. Authorized custodian can gain immediate access to lock with master key.

Free LOCK RECORD BOOK

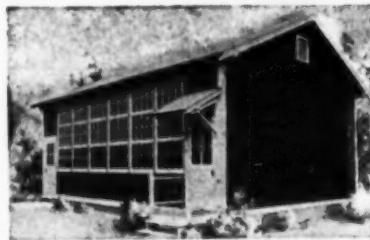
An attractive, durable, loose-leaf leatherette covered LOCK RECORD BOOK, containing charts for records of your Combination Locks, is available at no extra cost with each order of 100 locks or more.



NATIONAL LOCK COMPANY
Lock Division • ROCKFORD, ILLINOIS

NOW YOU CAN

Relieve that
Crowded
Condition with
a Minter
Portable
School



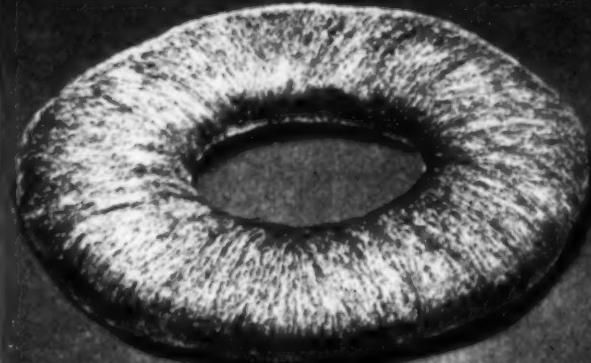
Minter schools have for many years been the logical solution to the problem of combining speed, service and saving in the erection of a school. They are definitely permanent structures but offer the distinct advantage of permitting speedy dismantling and re-erection at another location with a loss of material so low as to be relatively insignificant.

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Sun Ray's Radial Strands Work Faster!



Sun Ray Woolers for all disc-type floor machines

THE WILLIAMS COMPANY—Steel Wool Products
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Send literature showing how Sun Ray's radial strands save time and money and make floors safer.

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Free Shop Planning Help from Delta

In this practical handbook, "How to Plan a School Workshop," Delta shares with you its intimate working acquaintance with the particular requirements of school shops — authoritative knowledge gained through many years' association with the industrial arts field.

For example, this 44-page book provides you with photographs and layout drawings of 30 typical shops, for schools large and small. These are not fanciful shops "dreamed up" by Delta, but floor-plans of shops that have been actually built and proven practical in regular classroom use. They are the winners selected by impartial judges in a nation-wide shop-planning competition, from

hundreds of plans submitted by vocational instructors.

This helpful book also serves you as a condensed guide to principles of shop planning . . . to the selection, placement, and efficient use of the major power tools.

Here is useful information that is of value to you — from the standpoint of economy, safety, convenience, teaching efficiency — regardless of the present stage of your postwar planning.

There's a free copy of "How to Plan a School Workshop" ready for mailing to you. Send for your copy today, to help you keep well-informed on planning and equipping the school shop. Use the coupon on the next page for convenience.

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REG. U. S.
PAT. OFF.

Machine Tools

Turn the page →



Tear out coupon and mail today!

THE DELTA MANUFACTURING CO.
661B E. Vienna Ave., Milwaukee 1, Wisconsin

Please send me my free, personal copy of:
 "How to Plan a School Workshop."
 Catalog of low-cost Delta-Milwaukee Machine Tools.

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 Position.....
 Address.....
 City..... () State.....

S-20

Sent free to you . . .

Catalog of low-cost Delta-Milwaukee Machine Tools

for metalworking and woodworking

Use coupon below



Delta
14" Drill Press
with production table

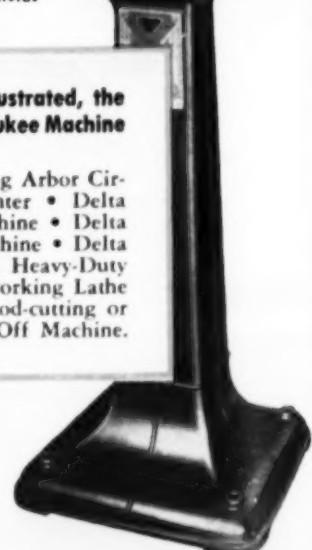


Delta
17" Drill Press
(for metal, wood,
or plastics)



Delta Toolmakers®
Surface Grinder

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with Safety Shields

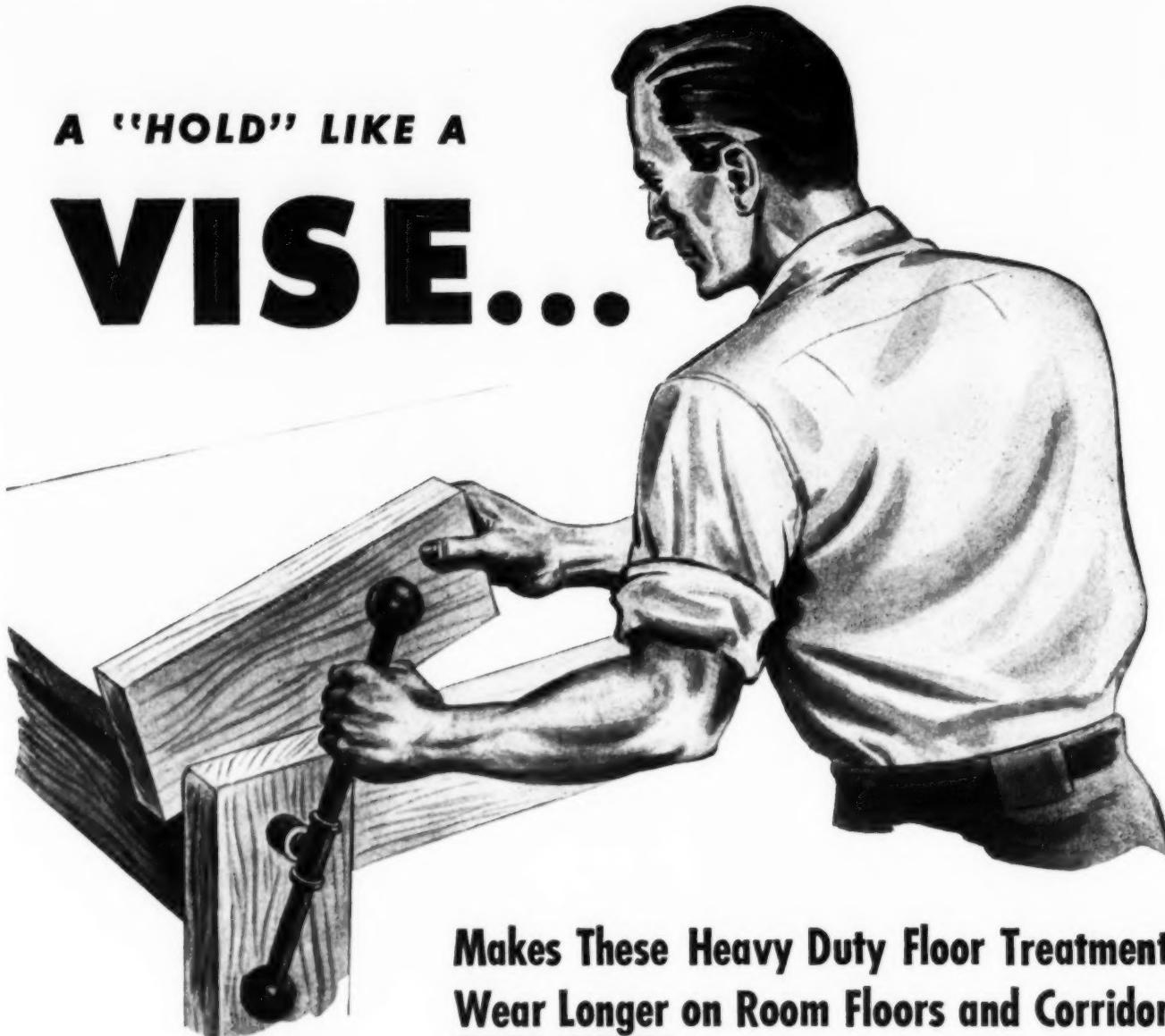


In addition to machines illustrated, the complete line of Delta-Milwaukee Machine Tools includes:

- Delta Unisaw® (10" Tilting Arbor Circular Saw) • Delta 6" Jointer • Delta Abrasive Belt Finishing Machine • Delta Abrasive Disk Finishing Machine • Delta 4-speed Scroll Saw • Delta Heavy-Duty Shaper • Delta 12" Woodworking Lathe • Delta 14" Band Saw (wood-cutting or metal-cutting) • Delta Cut-Off Machine.

Certain tools are available to schools under automatic priorities (CMP Regulation 5a). Consult your Delta distributor.

A "HOLD" LIKE A VISE...



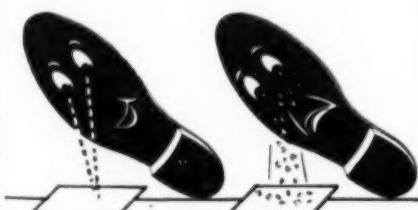
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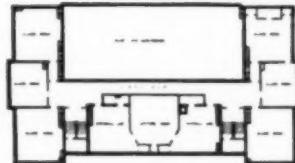
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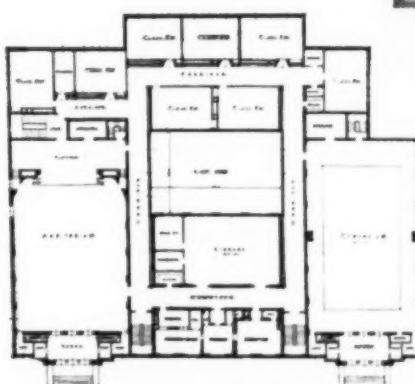
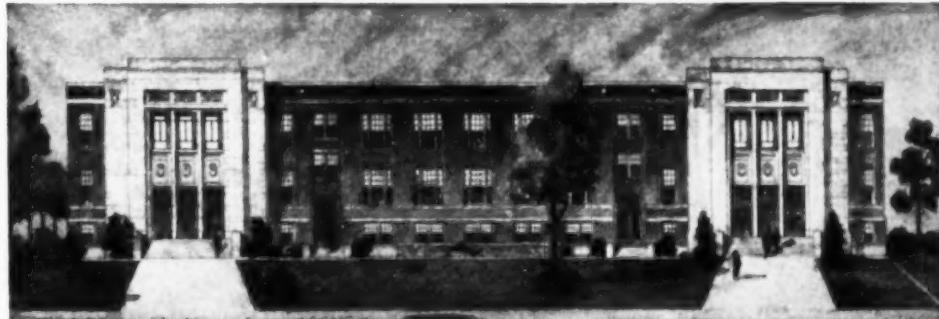


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The contents of this issue are listed in the "Education Index."
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In Convention Assembled

Nearly a year ago the American Association of School Administrators planned to hold the 1946 convention in a series of regional meetings, the exigencies of war permitting. Following the stoppage of fighting last summer, every effort was made to again hold a single national convention this year. Bringing together the entire membership in a single meeting provides the proper national setting and focuses the attention of the Nation on the deliberations of the A.A. of S.A. in convention assembled.

Still confronted with critical situations (in some areas even more acute than during the war) in travel, hotel and auditorium accommodations, the A.A. of S.A. will hold the four regional meetings as previously planned, at:

Kansas City—February 19-20-21

Atlanta—February 26-27-28

New York—March 5-6-7

Chicago—March 12-13-14

with educational and commercial exhibits only at New York and Chicago.

The peacetime program of school operation is now in the making. It involves an extensive program of change and expansion in every area of school administration. Requirements of the postwar educational program added to the banked-up need for new school-housing facilities involves a tremendous school building program beginning in 1946. Questions of Federal aid, surplus war property, finance, population shifts, procurement of equipment and supplies, labor situations, shortages of materials, and price structures, are among the problems involved in 1946 school operations. At no previous time has there been a greater need for the exchange of information bearing on these difficult problems and co-ordinated school administrative action in their solution.

Attendance at one of these regional meetings at this time becomes a most important administrative duty for every superintendent of schools.

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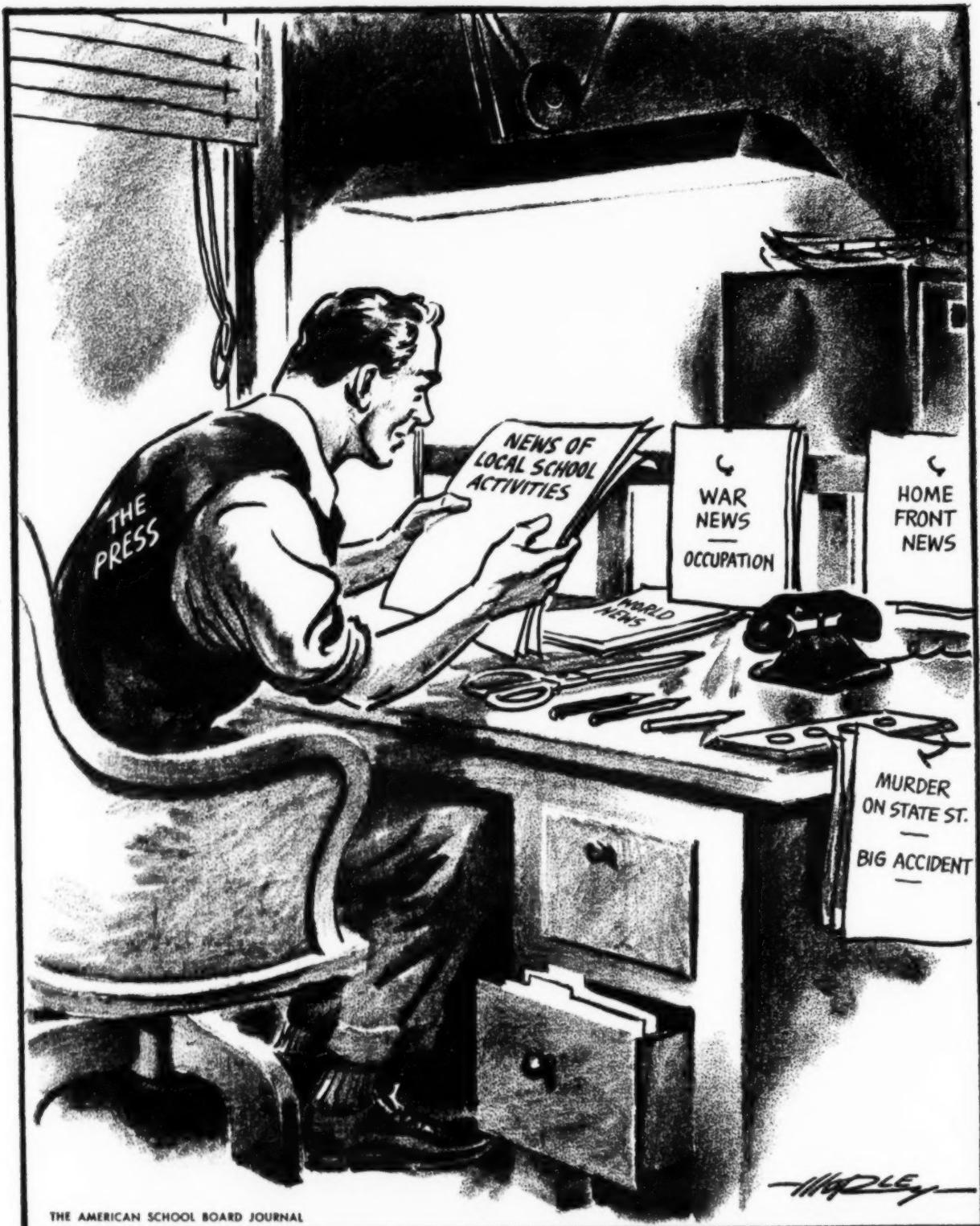
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THE AMERICAN School Board Journal

Volume 112, No. 2

FEBRUARY, 1946

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NOT SENSATIONAL READING BUT MOST IMPORTANT NEWS

A Different School

Roy L. Warren

School-year camping, an educational venture in which the public schools of Calhoun County in Michigan are taking part at St. Mary's Lake camp during the school year is under way. This is the second year of the program, believed to be the only one of its kind in the country.

Educators far and wide have their eyes on the venture, most of them hoping it will open new vistas in the educational philosophy of "learning by doing." Teachers and parents of Calhoun County also are watching it, the same hopes in their hearts for the benefit of the boys and girls involved.

Fifth and sixth grades, as last year, will attend the camp for two-week sessions throughout the school year. They will be housed in dormitory cottages, each accommodating 16 to 20 children and each supervised by trained counselors serving on the camp staff, which includes a resident director and assistant director and four counselors. One or more teachers from the public schools will be in camp with every group. It is hoped to complete the staff with a physical-education director especially skilled in winter sports.

So much for the general setup. Now to delve a bit into what goes on.

First of all, there is an informal atmosphere, which the staff seeks to establish because of the familylike conditions of living at camp. The 25 boys and girls from Battle Creek, Mich., who are now there have taken to calling Dr. George W. Donaldson, the director, "Uncle George." Mrs. Donaldson, who assists as camp secretary is "Aunt Lou" to them. The assistant director, Kenneth Pike, is called "Ken," and the counselors are also given similar names.

Ken has as his profession entomology. The youngsters would say he knows all about bugs, although they are glad they now know the scientific term for it. He knows about rocks and minerals, too, and while out on hikes he teaches about those things as they are found in their natural setting. Many a grubby finger has to be scrubbed with soap and brush after exploring among stones.

Mrs. Orah VanDeWarker, known as "Mrs. V," specializes in storytelling, dramatics, and individual counseling. The children look to her as "mother" of the camp, and it is easy to see why. She checks on whether soap and water touched behind the ears, helps Sally to get along better with Johnny, and listens to the children's personal camping problems. She also helps them to write or adapt plays and produce them for entertainment around the main lodge fireplace during the after-supper

hour. Through her guidance the children work at some of the creative arts.

One of the challenging phases of camp life is to learn to make things of materials found on the spot. Teaching of this is part of the job of Miss Marjorie Cushman, one of the counselors. Her college major was in science, but she also took a great deal of training in recreational work, and thus is able to combine the two to great advantage in her present job.

Lawrence Pierson, who has his degree in industrial arts, is an Eagle Scout and former scoutmaster, and teaches campcraft and woodmanship. The other day he felled a tree, told the boys and girls who watched him wide eyed and awed, that the best place for it to fall was across a stump. Thus it would be in position for cutting. The tree fell directly on the stump. Excited over his show of skill, the children were anxious to learn at least how to trim off the branches and cut them for firewood. Larry reports they did a good job, too, for beginners. The next day the boys and girls hiked, with lunch packs on the backs, three miles to a farm where there is a small sawmill. There they learned how a log is made into lumber, which ties in with their classroom study of Michigan history and industry.

Not the least of the learning experiences connected with the trip was the planning of a nutritious lunch, building a camp fire and cooking over it.

Another of the counselors is Miss Marcia Thompson, a registered nurse and former Girl Scout leader. Marcia gathers the children in their cabins for talks on personal hygiene, practice in simple first aid and in the way to make a bed properly. She takes them on health tours of the camp, showing them how a rural sewage system works and teaching them about other sanitary measures, especially with regard to drinking water. In whatever activity the children engage, she works with them to teach means of accident prevention and the first aid measures to employ if someone is injured.

One of the projects developed during the past week has been a weather station. Standard weather instruments — a recording thermometer, a rain gauge, a barometer, a weather vane and a humidity recorder — have been installed. With these to aid them, the boys and girls make predictions before breakfast and supper every day, for on the weather depends much of their camp life. They are even learning how to estimate the wind velocity, using woodmen's and coast guard methods.

Dr. Donaldson says that one of the most

important things learned at camp is the care of tools. "We teach them the respect which a good workman has for his tools and then we show them specific ways in which to take care of them," he adds. For instance, a few days ago several new youth-size axes were received. They had to be sharpened and otherwise prepared for use. From this the children learned that a sharp tool, whether it be ax or knife, never causes damage as a dull tool but that sharp instruments must be carefully sheathed when not in use.

Now someone is going to ask, "What about classroom work?" Well, that is taken care of, too. Definite class periods are arranged for by the teacher and principal of the school whose children are in camp, according to needs. The group now in camp is devoting time to spelling and composition, the latter principally in the form of letters written to families and to schoolmates. Reading is largely a fireside matter in the evenings, the children taking part along with the counselors.

Arithmetic gets a topnotch workout in camp, for the boys and girls operate their own bank, post office, and store. They learn through these how to keep bank books and write checks and how to balance books. As one boy said: "It's not like the problems in our textbooks back in school. Here we sell three candy bars, and that's one, plus one, plus one which makes three. Then we have to count up what three cost when each one is five cents. Here we add three fives or multiply five by three and we get the answer of fifteen. But that isn't all. We have to learn to make change, too. I never had to do that before."

And that is the whole point of the school-year camping experience. Aside from learning to know their classmates and teachers better by living with them 24 hours a day, they also have practical experiences employing classroom theory.

A number of parents wrote letters to the St. Mary's Camp Association after the close of the program last year, expressing themselves as enthusiastic about the results. Their children seemed to accept responsibility more readily after their camp experience, they returned home with improved food habits, they understood their teachers better and learned to get along with other children better. Furthermore, the practical experiences of keeping diaries, writing home, and working in the camp store had been a great help.

The camp program is a full one, but the children are never allowed to become too

(Concluded on page 96)

Education—Legally a State Function

J. C. Moffitt*

Nothing better characterizes education in the United States than its widely diffused control of the schools among and within the several states. This pattern of school management complies with the American ideal of government and offers a protection to all against any centralized agency directing the thinking and learning processes of the nation's children and youth. Wisely, the federal constitution made no provision for education but did specifically state that "the powers not delegated to the United States by the Constitution, nor prohibited by it . . . are reserved to the states respectively, or to the people." Historically, education has been both a local and a state function, and from an early date certain controls have been vested in local agencies while others have been lodged in the state. Granted that local boards of education customarily are given not only permission but a mandate to provide school buildings, employ teachers, and to do all things necessary for the actual operation of the schools, this phase of management in no way precludes the state as the basic source of control and it is at this latter level of government that much of the authority to direct education originates. In legal theory, the local school district exists as an organ of the state and is essential in order that the state may be perpetuated.

What the State Constitutions Provide

Universally, the several state constitutions contain the mandate to the legislative body to provide for a system of public schools. For example, the Illinois constitution states, "The General Assembly shall provide a thorough and efficient system of free schools." That of Kentucky likewise asserts, "The General Assembly shall, by appropriate legislation, provide for an efficient system of common schools throughout the state." In the case of Alabama, this decree is given: "The Legislature shall establish, organize, and maintain a liberal system of public schools throughout the state." The Arkansas lawmaking body is required to "ever maintain a general, suitable, and efficient system of free schools." Similarly Delaware's basic legal code is couched in identical words. A number of the state constitutions provide for a "uniform system" of schools, giving emphasis to the democratic ideal that all children in the state, regardless of local residence, shall as nearly as possible be provided with equal educational opportunity. Thus, the Wisconsin Constitution states, "The Legislature shall provide by law for the establishment of district schools, which shall be as nearly uniform as practicable." In Montana a

*Superintendent of Schools, Provo, Utah.

"uniform and thorough system of public, free common schools" is the order to the legislature. Likewise from state to state the mandatory commission exists and extensively the identical words have been borrowed from among the older state constitutions, thereby providing much duplication in content. In some of the states, the requirements of the legislature is couched with other edicts, thereby adding to the obligation of the lawmaking body. Thus, in California the legislature is required to "provide a state high-school fund from the revenues of the state," and to arrange "for distribution in such manner as the Legislature shall provide."

Three Important State Controls

It is a common procedure for the state legislature to give specific direction and control to local boards of education in subject-matter content. While some constitutions prohibit the legislature from prescribing textbooks, it often happens that a central agency such as a textbook commission is appointed to select the books and their use after adoption is mandatory. Likewise it is common practice for a state agency to prescribe the course of study. This is true particularly for noncity-school districts.

While the practice differs from state to state in terms of the amount or percentage of the total school cost, gradually the states are assuming an increased share of paying the education bill, and usually the same statutes that prescribe the methods by which this state-administered money shall be distributed dictate the standards necessary in order for the local schools to receive state revenue.

Most students of educational administration would probably agree that it would be a retrogressive act if local boards of education were again (as they were once) permitted to control certification of teachers, or in the more rural districts, particularly, to erect expensive buildings without approval by some state agency. The organization of supervision on the state level differs considerably from state to state, but in the main a central staff exists that from this focal point colors much of the learning process throughout the local school districts.

State Mandates Growing

An examination of recent legislative acts clearly indicates that state control is not diminishing. Only a miscellaneous selection of the many statutes enacted during recent legislative sessions can be included herein, but these may serve for the purpose of illustration. The lawmaking body of South

Carolina decreed, "The State School Book Commission is hereby authorized, empowered, and directed to provide Audio-Visual equipment, including films and motion picture projectors, for use in the free public schools of South Carolina."¹

In Kansas the legislature empowered itself to consolidate or reorganize existing districts or divisions of existing organizations without consultation or consideration of local administrative boards, and to do so they created an elaborate "Division of School Reorganization Within the State."²

In Iowa³ and in Utah⁴, among a number of other states, the legislature has established minimum teacher salaries below which local school boards may not pay. More specific in control was the Pennsylvania Legislature in 1943 when it decreed "the amount of the increase for each term" granted to teacher salaries.⁵

Mandatory orders concerned with subject matter and the establishment of educational objectives may be noted in the case of Oregon. The act states, "The board of directors of all school districts of the State of Oregon shall provide in their respective schools, programs of health instruction and physical education for the development of health and physical fitness for all elementary and high-school pupils in such schools." The aim is to attain "optimum physical growth, health, and physical fitness."⁶

Clearly portraying the paramount control of the state over the local school district, a Minnesota act decrees, "The State Board of Education shall prescribe regulations under which contracts, agreements, or arrangements may be made with agencies of the Federal Government" and local school boards.⁷

Important Wartime Measures

Much legislation was enacted during the war years intended to meet challenging emergencies. Thus, Maryland, among other states, passed a law requiring local school boards to re-employ teachers who were in the armed service. These were to be "restored to such position or to a position of like seniority, status, and pay."⁸ The New York Legislature made the decree that a teacher may teach who has been in military service "notwithstanding the fact that his license or last previous renewal shall have theretofore expired."⁹

¹Acts of South Carolina, 1945, Law No. 170.

²Laws of Kansas, 1945, Chap. 291.

³Laws of Iowa, 1945, Chap. 135.

⁴Laws of Utah, 1945, Chap. 91.

⁵Laws of Pennsylvania, 1943, Act. No. 329.

⁶Oregon Laws, 1945, Chap. 316.

⁷Laws of Minnesota, 1945, Chap. 371 — S.F. No. 107a, Sec. 1.

⁸Laws of Maryland, 1943, Chap. 997, Sec. 1.

⁹Laws of New York, 1944, Chap. 87, Sec. 2.

To aid local schools in obtaining teachers the Illinois legislature passed an act stating "a wartime emergency certificate may be issued and reissued."¹⁰ Emphasis is given herein to the fact that this prerogative is taken by a branch of state government and not one left to the discretion of a local board of education. Similarly, Louisiana enacted a statute granting leaves of absence to local school employees for military service, and in addition decreed that "boards shall grant leaves of absence to regularly employed women teachers for a reasonable time before and after childbirth . . . and (stated) that the tenure shall not be disturbed."¹¹

The several legislatures have not limited themselves to statutes concerned exclusively with school personnel. Many laws were passed dealing with the various physical properties, and with ways and means of financing the schools. For example, Minnesota school boards were authorized to purchase "school buses . . . on the installment plan."¹² Perhaps no state was more seriously affected by the various intricacies of the war than was California. To meet some of these problems, the legislature passed the "Validation Act of 1941." This was specifically corrective legislation deemed necessary "because of failure to comply with the school code" in the preparation of bonds preparatory to securing money for building purposes.¹³

Some have assumed that in those instances where local city school districts have been granted independent charters that the state thereby severs its control of education. Such an assumption is not necessarily correct. Legislatures have granted, altered, and regranted such charters. One such recent act may be noted wherein the Idaho legislature passed "The Charter of the Independent School District of Boise City."¹⁴

The Courts and State Controls

From time to time it happens that the management of local school districts finds itself in the courts, either for failing to conform to existing state laws or exceeding the authority that was intended in the statutes. It will be noted under such circumstances that another agency of state government is often called upon to determine the legality and justice of local board-of-education action. These court cases may not originate in state supreme courts, although they frequently do so. In other instances they are appealed from lesser courts to the state supreme court. Most of these cases greatly affect the entire educational procedure and give emphasis to the role of school management on state level. Only a few of the many relatively recent instances brought into state courts



Dr. Henry H. Hill
President, American Association of
School Administrators

Dr. Henry H. Hill, professor of education at Peabody College, Nashville, Tenn., has been elected president of the American Association of School Administrators for the year 1946.

Dr. Hill, a native of Statesville, North Carolina, earned his bachelor's and master's degrees at the University of Virginia and his doctorate at Columbia. He has had successful teaching and administrative experience in Arkansas, Kentucky, and Missouri, and has been widely active as a speaker and officer in professional organizations. After serving ten years as superintendent of schools at Lexington, Kentucky, he became assistant superintendent of schools at St. Louis, Missouri, and then dean of the University of Kentucky. From 1942 to 1945 he served as superintendent of schools at Pittsburgh, Pennsylvania.

can be referred to herein. The supreme court of Oregon has decreed that the control of education was the exercise of the state's police power.¹⁵ Not unlike most other states, the Oklahoma court has recently said education is obligatory and attendance compulsory.¹⁶ In California the court has made a clear distinction of public education as a "matter of general concern" in distinction to local or "municipal affairs."¹⁷ Within the same state it has been shown that "local regulations" must not interfere with statutory mandates.¹⁸ That free public education is not a right of choice, but a legislative mandate was made clear in the Montana State Court.¹⁹ In Washington, education is regarded as fundamental to the state.²⁰ The courts have held that local boards may make "reason-

¹⁰1979 P. 2d 257.
¹¹1994 P. 2d 549.
¹²1945 P. 2d 1021.

¹³182 P. 2d 434.
¹⁴1976 P. 2d 361.
¹⁵1950 P. 2d 36.



able rules and regulations as policy,"²¹ but they may not put aside an order from the state legislature. This may include such an item of detail as a subject of study. For example, when the state lawmaking body has included music in the prescribed course of study, the local school district may not discontinue this subject.²² Granting certain initiative on the part of the local board, the Kansas court has permitted the school-district management to prescribe courses in addition to those enumerated by the central state educational agency.²³

It frequently happens that the court will give local districts directives in dealing with the school personnel. Thus, in California a teacher who served a probationary period for legal tenure and was elected beyond that period of time attained permanent status, although that was not the intent of the local administration.²⁴ From time to time state courts make such notable decisions as the method by which a local school district may attain money.²⁵

Dissolution of Local Districts

Perhaps at no point is the power of the state more clearly observed than when a state agency completely eliminates a local school district or makes combinations of existing districts. This may be done without regard to the will of local administration. In Montana the court has said the legislature may determine any "rearrangement of school boundaries,"²⁶ and in New Mexico the court has said that one district can become two or more districts or that other alterations may be effected "that are not inconsistent with constitutional rights."²⁷

Control of education in the United States is neither exclusively the right of the state through its branches of government nor through its created agencies, such as a state board of education or of the local district — it is the combination of these. Public education in every state has a legal basis. It first emerges from the mandates of the state constitution to the legislature to establish public schools. The statutory enactments, in turn, are essentially mandatory to local districts. The courts within the state are called upon to interpret the law and in so doing influence the source of administrative procedure. Ultimately local boards of education provide the immediate management of the schools. Although the courts have repeatedly declared that local boards are limited to the authority specified in the statutes, generally the laws are not so specific that these community people are completely restricted in the specific phases of school control, and hence they do much in administering the local schools.

²¹182 P. 2d 391.
²²147 P. 2d 804.
²³73 P. 2d 49.
²⁴142 P. 2d 397.
²⁵New Mexico Reports 23 N.M. 205.

Equalizing Teacher Loads in Secondary Schools *Leonard B. Irwin, Ph.D.¹*

In a secondary school having more than three or four teachers, there arises the problem of the amount of work to be assigned to each teacher. In industry this problem is handled rather automatically in nonexecutive positions, for there is a standard pay scale for each type of work and each hour spent on it. In education, however, salaries are normally fixed by experience, training and similar factors having no direct relation to the amount and kind of work done. In this respect, they correspond more closely to the salaries of executives in business. Because teachers are public employees their salaries are much less flexible, yet variations of a wide degree may exist in the amount of work required at different times, or among several teachers at the same time.

In short, there are two variable factors involved in equalizing teachers loads—the pay given and the work required. Theoretically a ratio can be arrived at between these two factors that will be the same for each teacher in a given school. Actually this is almost impossible because of a number of limiting conditions. Among these conditions may be listed the following:

1. The impracticality of reducing salaries of individual teachers. Once adjusted to a particular work load, the salary cannot be reduced, and the load cannot be changed without distorting the ratio.

2. To a somewhat lesser extent, a similar barrier to individual salary increases.

3. The nature of teaching, which makes it almost impossible to evaluate the time or work value of a particular job.

4. Professional jealousy among teachers, which causes each to consider his own work as important and difficult as anyone else's.

5. Individual requirements of specialized knowledge and abilities which make it difficult to shift and re-allocate teaching duties.

6. The personal element which enters strongly into all school problems.

7. The range and variety of extracurricular activities.

These are a few of the general factors which interfere with simple solutions of the problem. In each school the administrator must seek the most practical answer to the question of how to arrange teaching duties and salary schedules to the satisfaction of the greatest number.

Factors in Teaching Schedules

There are a number of factors to be taken into consideration by the administrator in setting up teacher schedules. Even assuming the highly improbable condition

¹Principal of the Haddon Heights, N. J., High School.

of equal salaries for all teachers, he cannot then merely arrange the schedule so as to give each teacher an equal number of classes, pupils, study halls, home rooms and extracurricular activities. It is impossible so to divide the school program, and even if this could be done, loads would still not be equalized because of many intangible factors that do not lend themselves to numerical division. Among these last may be listed the following:

1. Nature of subject matter taught.

2. Type of pupils taught. This includes such pupil characteristics as age, intelligence, and social maturity. Probably the best way to equalize loads along these lines is to follow teacher preferences as far as possible.

3. Physical conditions. In any school some classrooms are more desirable than others, especially if the building is overcrowded and classes have to be held in rooms unsuited for them. Another situation often found in overcrowded buildings is that which compels some teachers to migrate from room to room and floor to floor during the day, carrying their materials with them.

4. Individual teacher differences. Here lies one of the most difficult areas of teacher assignment. In the first place, teachers, like pupils, may be divided into leaders and followers. Some of them are energetic, capable, and willing to assume any task or responsibility; others lack initiative, drive, and intellectual interest. Again, some teachers are naturally more efficient than others; anything they undertake is well and thoroughly done. It is natural for a principal to want to have nonteaching activities taken care of by those who will do them best. But he will find that too often the same teachers appear to be the logical choices, because they have those qualities which make them successful leaders. His problem is how to avoid overloading the capable, and giving lighter burdens to the less efficient.

The Problem of the Extra Jobs

5. The nature of extracurricular assignments. In apportioning these among the staff, it is evident that they cannot be assigned in equal amounts. Not only do teacher differences enter, but the nature of the activities themselves make some heavier than others. A teacher who is the only person qualified to act as head coach of football, basketball, or baseball may have assistants, but the principal responsibility is his. His authority cannot be divided, and his total load may be very heavy. In general, sponsors of activities who give public performances have a more arduous task than those whose activities

are self-evaluating, other things being equal.

6. Community service. The fact is often overlooked that a teacher's activity in community affairs, when they result from his position as teacher, may materially affect his total load, and should properly be considered in it. The teacher who lives in the school community may be asked to take a Sunday-school class, or a Boy Scout troop, or serve in some other civic capacity. Another teacher may live in an outside community and be entirely free, if he so wishes, of such demands.

It is quite impossible to achieve absolute equality in teaching loads if all of these factors must be considered in addition to the more tangible ones of class size, number of classes and preparations, and so forth. All that can be looked for is an approximation that will be reasonably fair and that will avoid the more obvious cases of bad casting, to use a stage term.

A Formula for Determining Loads

The first step in determining a reasonable equalization is the reduction of as many load factors as possible to a mathematical formula. Several measures for calculating teacher loads have been suggested, but that by Harl R. Douglass, as revised in 1934, is most widely used. This formula takes into consideration subject difficulty, number of classes a week, number of pupils, number of duplicate preparations, number of periods spent in nonteaching activities, and the length of the class period. For the purpose of calculating comparative teacher loads within one school, the last of these factors may be disregarded, since it is the same for all teachers. Omitting it, the formula is:

$$TL = SC \left(CP - \frac{2D}{10} + \frac{NP - 20CP}{100} \right) + \frac{PC}{2}$$

Douglass established an arbitrary set of subject coefficients as follows (SC in the formula):

- 1.1 English, science, social studies, commercial geography
- 1.0 Foreign languages, mathematics, commercial subjects
- 0.9 Shop, domestic arts, art
- 0.8 Music, physical education

These coefficients are used in the formula to allow for the outside preparation and inherent difficulty in teaching one subject as compared to another.

In using the Douglass formula to form a true picture of comparative teacher loads, one is faced by a marked inconsistency. Although differential coefficients are used to classify teaching assignments, no such distinction is made for extracurricular assignments. Douglass lumps all these

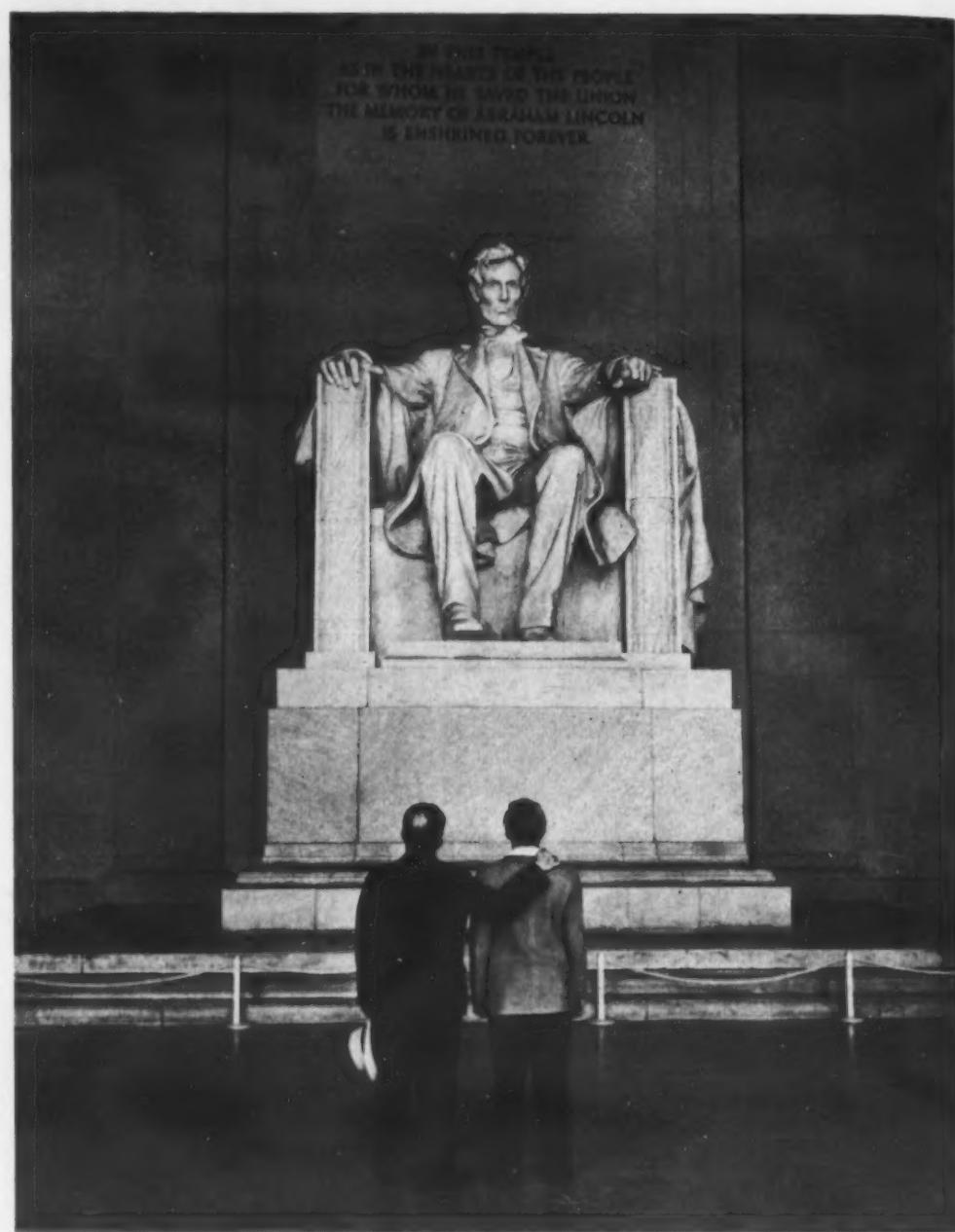
together and arbitrarily considers a period of extracurricular work equivalent to half a class period (PC divided by 2). Here the formula appears to be most meek, for extraclass work is much more than a matter of time serving. Two periods of supervision in a well-organized study hall may require much less mental effort than a single teaching period, whereas two periods of coaching football, directing a play or handling the business details of a senior yearbook may well be more exacting than even two class periods. This fact is well known to teachers and makes the use of the Douglass formula unacceptable in many cases. It is difficult to convince the football or dramatics coach that he is not working harder, hour for hour, than a study hall supervisor or the sponsor of the French Club.

The Formula Expanded to Measure Extra Loads

The formula may well be expanded, therefore, in order to make it measure comparative loads more accurately. The administrator and teachers of a given school, working together, can develop a set of coefficients for extra activities similar to those used by Douglass for class subjects. For example, home rooms might be taken as a base 1.0. Coaching sports or dramatics, or having charge of the school paper or annual might be rated at 1.1 or 1.2. Study halls might be considered as 0.9, and so on for every type of activity. The final term in the formula would then read $\frac{PCC \cdot PC}{2}$, with PCC representing the

appropriate pupil co-ordination coefficient. If a teacher's load includes different types of activities, they would naturally be listed separately, each with its own coefficient. An intelligent faculty would accept such a device, if it were co-operatively arrived at, and if it were made clear that the differentiation was being made on the basis of inherent difficulty and extent of nervous effort required, rather than on the grounds of any comparative educational value to the school. Such a plan is as reasonable for extracurricular activities as for class subjects.

One point that should be considered when a school is setting up a scale of coefficients for extraclass work is that of overtime—the extent to which a particular activity requires the sponsor to participate at hours not within a normal working day. In industry, recognition is given for overtime and holiday labor, but no such consideration appears in the school program. The director who works from the close of school until six or seven o'clock to rehearse a play or musical program is carrying an extra burden of strain not measured adequately in regular clock hours. The athletic coach who must give up Saturdays and frequent evenings should be given special consideration. Those activities which take much of a



—Lambert Photo

O Uncommon Commoner! may your name
Forever lead like a living flame!
Unschooled scholar! how did you learn
The wisdom a lifetime may not earn?

—Edmund Vance Cooke

teacher's normally free time should be weighted more heavily than those which do not.

Further Adjustments Necessary

Anyone who tests the formula thus amended, by applying it to a set of actual cases, will find an increased differentiation between teacher loads; and he will find that the results are more in line with the facts and his personal knowledge of the cases, than would be shown by the original formula. However, though comparative teacher loads may thus be more accurately determined, the problem still remains of how they may be further equalized. In some cases it may be possible to shift assignments, or reduce those of overloaded

teachers. But often this can be done only to a small degree, especially if the school is understaffed. When every practicable rearrangement has been made, most principals will find that there are still wide differences, with a spread that may range up to 30 or 40 per cent. Hence, only one answer seems to remain, that brings us back to the original two factors making up true teacher load equality—the work required and the pay offered for it.

If there is real inequality, and the first factor cannot be adjusted, then the second should be. In other words, we are forced to the conclusion that there must be a regular system for rectifying unequal teacher loads through salary adjustments. This can best be done by a schedule of

yearly bonuses, which can be given and later dropped if necessary, without legal complications. The system can operate in connection with the teacher load formula, by specifying increasingly large bonuses for increasingly high percentages of teacher load above a fixed norm. Merely by way of example, it might be calculated like this:

If the normal load for a given school be fixed at 33,000 units,
For loads from 10 to 15% above norm — \$100 bonus
For loads from 16 to 20% above norm — \$200 bonus
For loads from 21 to 25% above norm — \$350 bonus
For loads from 26 to 30% above norm — \$500

The bonus details would of course be a matter for school-board policy, like the regular salary schedule. Changes in assignments from year to year would be taken care of automatically through raising, lowering, or withholding the bonus. It would be desirable to set a ceiling on the possible load, in order to prevent teachers from trying to take on more work than they would be capable of handling. It might also be desirable to have a teacher committee empowered to recommend extra units for those teachers who in some way had contributed special service to the school without gaining recognition in the formula.

An Approach to Justice

Evidently the success of such a plan depends almost entirely on two things—the willingness of a school board to pay

extra money for what sometimes seems to them like intangible services; and the willingness of the teachers to accept a mathematical formula as the basis for estimating their effort. Both of these can be accomplished if the meaning of the formula is once thoroughly understood, and a rather rigid and formal set of standards accepted for the more subjective parts of it—that is, the subject and extracurricular co-efficients, and also the number of hours per week properly required to handle an activity. To avoid argument, it would be best to reach an agreement that coaching swimming would be considered as taking 3 periods a week through the year, for instance, or sponsoring the Science Club 1.5 periods. This could be done for all such activities, and the established figure used for each year's calculations, unless changes in the nature of the activity made a modification reasonable.

Like any formal system which attempts to deal with human relationships, this plan would have its difficulties. But they would be few in comparison to the hit-or-miss system used in most schools. The general rule now is to do as well as possible until complaints are heard, then to pacify the loudest complainers in some way and hope for the best. This is often expedient at the moment, but it is not just, nor does it make for good morale among a school staff. It lends itself to personalities and to petty jealousies. Any system of reward for work done is better if it is written down, understood, and applied impartially to all.

Pertinent Underlying Principles

A. For the Supervisor

1. The objective of the supervisor is to raise the standard of teaching of the classroom teachers.
2. The best service of the supervisor is through that organization and those methods which give help to the teachers in conducting the physical-education program.
3. The supervisor is responsible for the planning of general program content, and for helping the teachers in putting that program across.
4. The supervisor should never be allowed nor expected to act as a relief teacher, freeing the classroom teacher for a rest period.
5. The supervisor should function through demonstration teaching, observation, and conferences with the teachers, the relative amount of each function to be determined by the supervisor in terms of the problems of each specific teacher.

B. For the Teacher

1. The teacher is responsible for conducting the physical-education program on every school day including the day on which the supervisor visits her class. When she is relieved it is only for the purpose of permitting her to observe demonstration teaching.
2. The teacher shall be present during every visit of the supervisor and shall make every effort to profit by observing demonstration teaching by the supervisor, or by teaching at the supervisor's request, that the supervisor may know:
 - a) What and where help is needed
 - b) How well her own efforts are accomplishing the objective toward which she is striving
3. The teacher shall look to the supervisor for help and shall ask for it when conscious of need.
4. The teacher shall plan her lessons on the basis of the general outline furnished by the supervisor.

A Tried Plan

This is a workable, efficient plan. It has been tried and found effective. It is the most economical plan in that it gives the greatest return upon the financial investment the community has made in the supervisor. It is the best plan from the standpoint of educational administration, for it can be made the greatest impact upon the problem of the improvement of teaching. Properly organized it becomes the most popular plan, for any teacher worthy of the name quickly comes to realize how much more help she receives than by other plans.

To administrators with supervisors who are not using this plan, the above is recommended for their consideration.

ELEVEN HUNDRED RURAL TEACHERS LEAVING

The emergency in rural education has not diminished since V-J Day, according to a release issued by the Wisconsin Education Association. The association points out that 1101 one-room rural teachers, or 24 per cent of all rural teachers in the state, plan to quit teaching at the close of the current school year. Since the number of graduates from county normals and rural courses of state teachers' colleges is less than 350, the rural schools will suffer a loss of 650 teachers.

Rural education, it is explained, is further handicapped by the short time rural teachers remain in the same school. Six per cent of the rural teachers opening the schools in September leave before the end of the school year. About 50 per cent of the teachers do not return for a second term in the same school.

Supervision of Physical Education in the Elementary Schools

William P. Uhler, Jr.¹

In the development of the physical education program in the elementary school three methods of teaching setups have evolved. They are:

1. Situations in which physical education is taught by specially trained physical education teachers (usually in the larger cities).

2. Situations in which physical education is taught by classroom teachers, a specialist in physical education being available for supervisory help.

3. Situations in which physical education is taught by classroom teachers, without special supervision.

This article will deal with the second plan.

Usually when a specialist is available, that person, usually a woman, is called a supervisor. All too frequently this person who visits a school periodically, say once per week, is, in the minds of the classroom teachers, responsible for the physical education program. Again all too frequently the teacher considers the period when the specialist visits her class a free period for herself. Sometimes the teacher

may not even be present during the specialist's visit. Analysis will show that this method is ineffective and inefficient. When it is the accepted practice it results in one good physical-education period per week, with little or nothing happening on the other days.

Daily Instruction Needed

A sound physical-education program would have as a basic premise a daily period of physical-education activities. Obviously, when one specialist works with thirty or more teachers in five or more schools, it would be physically impossible for her to conduct a physical-education period for each class daily. In the opinion of the writer it would not be desirable even were it possible, for at no time does the classroom teacher get closer to her pupils or get to know them better than during the physical-education period.

If one accepts the thesis that the function of the supervisor is to raise the standard of teaching of physical education throughout the whole school system in which she works, the problem is to so plan her work and relationship with the classroom teachers, that this outcome will accrue. This necessitates the establishment of certain underlying principles.

¹Associate in Health, Safety, and Physical Education, New Jersey State Department of Public Instruction, Trenton 8, N. J.

Spelling at the High-School Level

John W. Bell, Ph.D.¹

The Spelling Problem

Little has been done about the spelling problem in the high school, although every teacher at that level knows that it is a most perplexing one — especially in grades nine and ten. In grades 11 and 12 there is an amelioration, either because the educational experiences which the young people have had over the previous three or four years have been effective, or because those pupils most afflicted with spelling disability have reached the upper limit of the compulsory school-age span and have withdrawn. We don't know exactly, for our studies of cases of disability in spelling have been cross sectional rather than longitudinal in character.

Although in general the good reader is also a good speller, a study of the reading and spelling test scores of incoming freshmen reveals that many students who do well in reading do very poorly in spelling tests. Then, too, there are many students who speak both fluently and correctly but are neither able to punctuate correctly what they write nor able to spell with accuracy. The lack of a high positive correlation between the spelling and reading ability of these exceptional students is probably due to the emphasis in recent years upon the reading of meaningful wholes in the early grades and rapid silent reading for meaning in the upper grades, with consequent subordination or complete elimination of phonetics and word analysis. Some students are able through an inductive-deductive process to discover for themselves the principles of phonetics and word analysis; and they are challenged, in order to learn the order of the letters, to look carefully at words that fail to conform to the principles of orthography which they have evolved. Others cannot be bothered by such distractions either because of indifference, lack of insistence on correct spelling on the part of teachers, or because of extreme interest in or concentration on the thread of the story or discourse which they are following.

The Chicago Spelling Committee's Work

The group in charge of revision of the high-school English curriculum in Chicago appointed a committee of 10 selected teachers to study the different aspects of the spelling problem and report back what steps should be taken to deal with it effectively. The committee of ten was composed of two teachers of English from each of the five high-school districts of the city, selected from schools with varying types of pupil personnel — those with poor socioeconomic backgrounds, and those with excellent home conditions; those largely of foreign parentage, and those from old American families.

In order to compare the situation in the 10 schools represented, they asked their freshman English classes to write three compositions: a letter, a simple narration based on a common assignment, and an exposition of a simple nature. Comparison of the words most commonly misspelled in the different communities revealed, as was expected, that misspellings common to a great many students were limited — not more than 600 words.

Assembled for comparison of findings and discussion regarding next steps, the committee agreed on the following principles for experimentation with remedial measures:

1. Because of the vast individual differences in spelling ability that have developed during the elementary-school period, and because of the limited time available for instruction in spelling at the high-school level, the method to be used for remedial instruction in spelling must be very largely individualized.
2. Small-group instruction may be organized for those in need of special instruction in such matters as phonetics, word analysis, and use of the dictionary.
3. All teachers of English, as well as all other teachers whose services

¹District Superintendent, High School District No. 1, Chicago, Ill.

can be enlisted, should concentrate on the elimination of misspelling of the most common words in our language — those appearing among the first three or four thousand on the Horn word list.

4. The principal aim beyond a writing vocabulary of minimum essentials should be to make each individual student quite spelling conscious and to hold him responsible for spelling correctly all words used in his written work. That is, each student should be held strictly responsible for consulting the dictionary or some other authentic source when in doubt about the spelling of any word which he contemplates using.

Results of the Analysis

Not only were words commonly misspelled analyzed for the purpose of discovering the causes of the misspellings, but also selected students were observed and questioned as they wrote some of these words in order that their mental processes might be analyzed. These classifications of errors were revealed: (1) insertion of unnecessary letters; (2) omission of letters; (3) transposition of letters; (4) substitution of one combination of letters for another of the same or similar sound; (5) confusion of homonyms such as *to, too, two*; and (6) phonetic spelling of words partially or wholly nonphonetic. The causes were largely these: (1) lack of understanding of phonetics; (2) overdependence upon phonetics in dealing with a language that is nonphonetic to a considerable degree; (3) defective pronunciation of many common words by students of foreign extraction or from communities in which mispronunciations of common words prevail; (4) failure to concentrate upon the difficult parts of certain words for the purpose of building up associations helpful to the memory; (5) ignorance of helpful rules for spelling; (6) supervised writing activities too meager to promote familiarity with common words; (7) intelligence and language sense apparently insufficient for mastery of spelling; (8) insufficient attention to individual word forms in reading, listening, and speaking; (9) ignorance of certain principles of grammar and semantics that assist in differentiation between the spelling of words according to function and meaning — such words as *to, two, and too; mail, male; ate, eight; accept, except*; and, above all, (10) indifference, nonchalance, and carelessness.

Eliminating the Causes of Disability

The committee of 10 divided among themselves the causes that had been isolated, and proceeded to develop effective methods of eliminating those causes either partially or wholly. They did not keep elaborate records to show the extent to which their remedial measures were effective, nor did they attempt to answer for all time the problems that have been facing teachers of spelling throughout the ages. They were simply seeking some practical methods of dealing with the various causes of spelling disability which they had discovered, in order that there might be included in the new English curriculum some productive activities and suggestions for dealing with the spelling problem as it is related to the normal language-arts activities with which the teacher of English deals. A few illustrations of the activities developed may prove helpful to the teacher or administrator seeking assistance in the elimination of causes of spelling disability at the high-school level.

Conquering Indifference, Nonchalance, and Carelessness

Teachers serving on the committee set out to combat the carelessness, indifference, and nonchalance of certain students with reference to their poor spelling. Several techniques that bring results have been evolved. Witness:

Unit 423, page 47, activity 51. Have a committee of the best spellers in your class check certain written assignments of the members of the class to discover misspelled words. Commission this committee to make lists of the words misspelled by various members of the class. After the lists have

been checked by your teacher, they should be given to the offending students for study.

Unit 423, page 46, activity 50. Analyze the errors to be found on your own individual spelling record sheet. What weaknesses do you discover? Do you habitually (a) insert unnecessary letters; (b) omit letters; (c) transpose letters; (d) substitute one combination of letters for another of same or similar sound; (e) confuse homonyms such as *to, too, two*; or (f) spell phonetically words that are partially or wholly nonphonetic? If you have difficulty in making the analysis called for, ask the assistance of the spelling committee member who compiled your list for you. Also ask his assistance in discovering the causes of your errors and means of eliminating them. Determine to become literate, to learn the simplest of arts—spelling.

Unit 423, page 46, activity 49. Acquire a good dictionary for your constant personal use. Consult it, in connection with your writing activities, for the correct spelling of any word whose spelling puzzles you. Keep a record of all words which have given you trouble. Try to discover the kind of study which you should carry on independently to master the art of spelling. That is, try to discover the parts of your spelling demons which give you trouble, build up helpful associations, concentrate and practice sufficiently on these crucial elements to become absolutely sure of the nature and order of the letters comprising them. Again ask the assistance of a spelling expert serving on the spelling committee of the class.

Teachers carrying on experimentation have found that joint conferences with students and their parents are helpful. If the problem is carefully defined for the parent or guardian, and a definite remedial program outlined to be carried out at home and progress checked periodically in school, improvement often results. Parents for the most part do not need to be convinced of the importance of spelling. Generally the parent has been aware for some time of the spelling disability of his son or daughter, but has been at a loss to know what to do about it. The attack planned by the teacher is most welcome; but because parents are busy and human, they need urging and moral support to carry through the enterprise as planned.

Dealing With Phonetic Disability

Those attempting to remedy extreme cases of phonetic disability found very helpful a little volume entitled *The Secrets of Word Building*, prepared by Mrs. Dorothy Page, and published by the Bureau of Child Study of the Chicago Board of Education. It was designed for use in the English R classes, to which are assigned those students whose reading ability is considerably below the norms for high-school entrants. The volume treats the subject of phonetics in a very systematic and thorough way, but on a level and with a vocabulary beyond the primary stage—interesting for high-school students who need this type of training.

Often students at the first- and second-year levels of the high school are far from mastery of the intricacies of the systems of diacritical marking used by publishers of the leading dictionaries. The Chicago English course provides adequate activities designed for training students to determine, through consulting the dictionary, the correct pronunciation of unfamiliar words encountered in their reading. They are also conditioned to consult the dictionary for the correct pronunciation of familiar words pronounced by radio artists or others in a fashion differing from that to which they have been accustomed. This training in the interpretation of diacritical markings has been successfully related by members of the committee to training in phonetics, so much needed by students with a spelling disability. Activity No. 47 will serve to illustrate:

Unit 423, page 46, activity 47. Use your dictionary as an aid in commanding the pronunciation of new words, but check, whenever possible, the authorization of your reference books with the pronunciation used by those whose speech you respect. After investigation, prepare to pronounce each word correctly in a sentence which you create.

absurd	comparable	figure	inventory
alias	decade	gesture	leisure
alternate	deficit	hospitable	museum
apricot	detour	hypocrite	mustache
azure	dictator	illustrate	orchestra
			positively

The speech of the young people in Chicago, as in other cosmopolitan centers, is determined by the language environment of the community in which they live. Germans, Italians, Polish, Swedes, Greeks, and peoples of many other extractions have their own peculiar pronunciation shibboleths. Consequently, their off-

spring have certain pronunciation handicaps because of the corruptions of English which they constantly hear. Much work must be done to train the young people in the correct sound values of certain letters and combinations of letters—through drill, through consultation of the dictionary, and through constant correction in functional situations. The following activity is illustrative of the type of training needed:

Unit 423, page 45, activity 46. Careful speakers in the Chicago area (a) respect letters and syllables in words like *getting, such, just, across, going*; (b) place the tongue low enough to avoid nasality in saying words like *campus, cram, man, land*; (c) distinguish between the sounds of *d* and *t* or *th*, of *w* and *wh*, of *ch* and *j*, of *w* and *l*. Pronounce groups like these for practice in careful speaking.

den — ten — then	choose — juice	wit — whit	well — weiw
din — tin — thin	char — jar	ware — where	tell — telw
door — tore	father — fodder	deem — team	

Limiting Dependence Upon the Ear

Although a knowledge of phonetics is very helpful in the spelling of English words, the student must be trained to exercise restraint in the use of his knowledge of phonetics, to be wary of his ear, to use his dictionary and reading materials to check visual impressions against aural impressions, and to remember that there are various letters and combinations of letters having identical or similar sounds. The following activity was designed to call the attention of the student to the groups of letters having identical or very similar sounds.

Unit 425, page 75, activity 17. Consider the following pairs of words. Such words, with similar sound but with dissimilar spelling and meaning, are called homonyms. Consider the list carefully. Add to the list other words which give you difficulty when writing.

ate	eight	herd	heard
by	buy	horde	hoard
cell	sell	insight	incite
course	coarse	know	no
compliment	complement	metal	mettle
dear	deer	principal	principle
dual	duel	profit	prophet
sale	sail	steel	steal
seem	seam	to	two, too
stair	stare	their	there, they're
stationary	stationery		

Committee members also found it helpful to analyze words wholly or partially nonphonetic, such as: *often, whole, righteous, fasten, colonel, sergeant*.

Teaching the Rules of Spelling

Although there has been a tendency in recent years to use a pure-practice method for teaching spelling, the Chicago spelling committee has become convinced through experimentation that students with a spelling disability may be greatly assisted through mastering some of the rules for spelling. Activities illustrative of those designed to teach such rules are these:

Unit 423, page 47, activity 55. Overcome the troublesome errors arising in dropping, or not dropping, the final *e* before a suffix. Here are some test words. What rules can you safely apply?

arguing	owing	writing	canoeing
dining	placing	tying	hoeing
gluing		dyeing	believable
hoping	planing	singeing	desirable
moping	sloping	singing	livable

Unit 423, page 47, activity 56. Discover some rules to use in spelling words which double, or do not double, the final consonant before a suffix. Try your skill in spelling these words:

hopping	boiling	committing	faltering
mopping	containing	conferring	developing
planning	proceeding	occurring	galloping
sitting	soaking	preferred	
stopping			

Unit 423, page 47, activity 57. Do you meet a hurdle in spelling words ending in *y*? What generalization can you make about spelling such words? Try these.

accompanied	annoyed	burying	trolleys
buried	arrayed	hurrying	valleys
copied	displayed	pitying	boys
hurried	accompanying	monkey	babies
pitted			

(Concluded on page 96)

Teaching Comes First —

The School Administrator a Master Teacher

Watt A. Long¹

The principal qualification of a good school executive a quarter of a century ago was that of being a master teacher. The school executive was expected to be able not only to instruct a class of children when the need arose, but to demonstrate for the benefit of the teacher. Very little differentiation was made between teaching children and teaching adults. It was all teaching and considered a part of the principal's regular duty. As the number of subjects increased in the school and specialization became more common, the principal selected a special field in which to do his teaching, but he was still looked upon as the master teacher. Frequently, when the principal visited a teacher, he might even take over and develop a lesson in order to demonstrate the proper techniques to the teacher.

Development Away From Teaching

The administrative duties of the principal increased with the extension of the curriculum and the increase in the enrollment. The most conspicuous decline in the actual classroom activities of the principal was in the large city high school. The colleges and universities began to give greater emphasis to courses in administration for school principals. In fact, the general philosophy in education became a mere collection of administrative devices — "tricks of the trade." The principal became an administrator. His duties became that of a manipulator of programs and class schedules. His principal concern was to develop a machine which operated smoothly on a fixed schedule. His last concern was the way in which Johnny learned. If the child could not keep up with the inflexible schedule, he failed and repeated the course, or grew tired and left school. The principal saw the teacher in the morning or at infrequent building meetings. In some instances the principal visited the classroom for a few minutes to make a perfunctory check on the equipment, the activities, and the room arrangement and to see that it met with the specifications set up by him. The new duties of principal or administrator precluded any possibility of actual teaching. No self-respecting administrator would think of attempting a classroom demonstration in order to help some of his struggling teachers. That was the job of the supervisor or the specialist in the field who infrequently was persuaded to give demonstrations for the teachers. The co-ordination of the instructional program in the school was left to the interest of conscientious teachers who discussed their common problems during the lunch period or at chance meetings.

The administrator not only ceased to be a

teacher of children and thereby lost the technique but, further and more tragic, he was unable to teach the teachers in his school. Basically, the learning processes retained the same characteristics regardless of the age of the learner. Herein lies much of the difficulty in bringing about desirable changes in the work of the average classroom teacher. The administrator or even the college and university professor ignores the laws of learning when he undertakes the task of leading a group of teachers. All too frequently, the very basic principles which he wishes to have the teacher understand and use are ignored. Any appreciable progress in education is doubtful if the above-mentioned practice continues. The writer does not in any way wish to minimize the importance of the administrative problems of the school principal. It is imperative, however, that if desirable growth in education is to be accomplished, the principal must concern himself with the instructional program in his school. Concerning himself with this program means more than a perfunctory visit to the classroom for a few minutes' observation or preview of some special activity which the teacher and children have developed. The leadership of the principal in the school so far as the instructional program is concerned cannot be carried on by any other person. This program means definitely that the principal must be a master teacher. Because the growth and development of his teachers, for the most part, depends upon the relationship between the teachers and the principal, the latter must provide the professional leadership and inspiration to his group. This he cannot do unless he is a master teacher. He cannot lecture at length about the recognition of individual differences when dealing with children and ignore the same principle when dealing with his faculty. Individual differences exist among teachers as well as children, and the principal must recognize these differences in the preparation of material to be presented to the teachers. It is necessary, likewise, to give much individual help to certain faculty members in accordance with their needs. To put the whole group on the same basis, assuming equal preparation and ability, is presumptuous and almost certain of failure. In the recognition of individual differences among teachers, the principal follows the same techniques that are recommended for teachers in developing learning activities with children.

Observation and Understanding Basic

Frequent observation of the work in the classroom is essential to an adequate understanding of the teacher. The home environment, likewise, plays an important part in the teacher's general ability and outlook, and should be known to the principal. The same

practice used in preparing for a class of children should govern the planning for professional meetings. The principal should be ready to refine the preliminary plans as the program develops, with the teachers participating. The principal, as the master teacher, directs the development of the professional meetings toward the goals mutually agreed upon. The professional meeting is a prepared learning situation for the teacher and principal; therefore, the same desirable practices should prevail as govern the learning situations set up for children.

The writer is of the opinion that the present-day principal in a large city school should be qualified to take over certain aspects of the instructional program in his school and do a creditable job of teaching when the need arises. The laws of learning which should govern in the presentation of subject matter in specific fields do not vary; therefore, the principal can offer satisfactory demonstration teaching in his chosen field. Suffice it to say, such a demonstration will go a long way toward encouraging teachers to improve their classroom procedures.

The Superintendent's Responsibility

If this ability is desirable in a school principal, it is even more so in the city superintendent whose ultimate aim is to improve the teaching in all classrooms. He has the responsibility of teaching the principals. He cannot do this unless he is a master teacher. He may initiate many desirable changes in the system, but to succeed in making them functional with all teachers he must be able to teach the principals who in turn work with the teachers. A few city superintendents are devoting a part of their time to the instructional program in the schools. Their approach to the problem of instruction must be direct. It is desirable to have the superintendent conduct seminars for classroom teachers. He must delegate certain administrative tasks to his assistants in order to provide time for the above described program. Some few superintendents of cities of a hundred thousand or more population even attempt to participate in the instructional program. The writer is acquainted with one city superintendent of a large city system who devotes eight hours each week for 24 weeks to a well organized program which includes teachers, principals, supervisors and directors. This administrator is a master teacher.

► DR. WILLIAM L. ETTINGER, superintendent-emeritus of the New York City public schools, died at Sarasota, Fla., December 26. He was 84 years old.

Dr. Ettinger was superintendent of the city schools from 1918 to 1924, a period which was the stormiest in the history of the local school system. In addition to his professional contributions to the school system, he was active in teachers' affairs and was responsible for improving the welfare of the teachers. He was the author of a number of textbooks.

¹Assistant Superintendent of Schools, Portland, Ore.

How We Began the Re-Education of Nazi Germany Col. James R. Newman¹

Having been a school administrator in civilian life and now having become director of the Office of Military Government for the newly created state of Greater Hessen in Germany, I am naturally more than interested in one of the 18 major functions of my office.

When the military organization I now head entered Germany in March, 1945, during the Battle of the Rhineland, most of the officers had been particularly trained to carry on special functions in governing Germany, such as legal, fiscal, property control, education, public safety, etc. The march across the Saar, Pfalz, and Hessen west of the Rhine was no easy task for those officers whose primary objective was to restore some semblance of order to the devastated areas caused by war.

After we had finally located our headquarters in Neustadt an der Weinstraße, after moving from Saarbrücken to Zweibrücken and finally to Neustadt, we proceeded to set up the first regional civil government for postwar Germany. This government was formally installed on May 18, 1945. Considerable work was done toward setting up a new system of education for the youth of Nazi Germany, before we formally turned the area over to the French army, on July 10, 1945.

The real progress in the new program of education made by my educational functional specialists headed by Major James F. Bursch, deputy superintendent of schools for Sacramento, California, and assisted by Captain Vaughn DeLong, superintendent of schools for Oil City, Pennsylvania, and Lt. Erwin Dingman, an instructor at New York University, actually began on July 16, 1945, in Wiesbaden, Germany, when the organization took over the military government responsibilities for the Regierungsbezirk Wiesbaden.

The chronological chain of events listed below gives the steps taken to re-educate the youth of the newly created state of Land Greater Hessen, Germany, after they had been indoctrinated for years in Nazi ideology.

I. Period of July 10, 1945, to August 15, 1945

1. Reviewed a partly organized Regierungsbezirk Wiesbaden department of education, replaced active Nazi by non-Nazis and completed the reorganization of the said Regierungsbezirk department of education. Issued a special set of instructions concerning the wishes of military government regarding German education.

2. A preliminary survey of school buildings and school staff conditions was made through

the local military government detachments in the Regierungsbezirk Wiesbaden.

3. We screened and, in most instances, replaced superintendents of schools (*Schulräte*) in each Kreis in the Regierungsbezirk Wiesbaden.

4. In co-operation with the Special Branch Public Safety Section directed and supervised the screening of all *Volksschule* teachers in the Regierungsbezirk Wiesbaden. Of the 1939 teachers screened in the Regierungsbezirk Wiesbaden for elementary schools, 965 were dismissed and 974 were retained in teaching positions.

5. Directed through the German school officials the formation of youth working parties, pending the opening of school. Agricultural assistance and clean-up work were the principal projects.

6. Directed each Kreis education officer to proceed to file an application with this headquarters for the reopening of all *Volksschulen* by Oct. 5, 1945, in accordance with the July, 1945, *USFET Handbook on Military Government in Germany*.

7. Ordered the Regierungsbezirk director of education to appoint two committees for the de-Nazification of courses of study in accordance with the directives of military government, one for cultural subjects and one for social sciences. These committees worked under the direct supervision of this head-

quarters. These fields were judged to be the most critical as they were known to be most modified by the Nazis.

8. The Regierungs director for education was ordered to outline a practical program of physical education for elementary schools and to make plans for the reactivation and publication of professional educational periodicals.

9. Sent competent observers to do "sample listening" in churches and analyzed pastoral letters to determine whether political views were being expressed under the cloak of religion.

10. De-Nazified, directed, and supervised the reopening of the *Landesbibliothek* (the regional library) and the institution of the *Volksbücherei* (lending library).

11. The impounding of all textbooks, films, and other teaching aids was ordered throughout the Regierungsbezirk Wiesbaden. Instructions were issued that these teaching materials should be segregated into Nazi and non-Nazi categories and held for further instructions. Specific orders were given that none were to be burned.

II. Period of August 15, 1945, to October 8, 1945

1. Received, analyzed, modified, and approved applications for the opening of all elementary schools in the Regierungsbezirk Wiesbaden. The elementary schools under the jurisdiction of this headquarters were opened by October 5, 1945, which was the target date.

2. A survey was completed of all material requirements to carry on the schools in the Regierungsbezirk Wiesbaden up to September 1, 1946.

3. Application forms were developed and distributed for the reopening of vocational schools, middle schools, and high schools.

4. Preliminary work was done on the reorganization of a teachers' college for the area.

5. A series of institutes were planned and conducted in each Kreis in the Regierungsbezirk Wiesbaden for the purpose of re-orienting the teachers who remained after de-Nazification. These institutes ran from one to three days each and were conducted by joint staff of military-government officers and carefully selected German school officials.

6. A total of 271,000 army-printed textbooks for the first four grades of the elementary schools were hauled from Munich and physically distributed throughout the entire Regierungsbezirk. The following graphic chart shows the number of first eighth-grade textbooks physically distributed by this head-



Col. James R. Newman

¹Director of the Office of Military Government for Greater Hessen, Wiesbaden, Germany.

quarters to the Kreis teams. Each X stands for 1000 books:

Usingen	XXXXXX
Rheingau	XXXXXXXX
Obertaunus	XXXXXXXXXX
Untertaunus	XXXXXXXXXXXX
Oberlahn	XXXXXXXXXXXXXX
Schlüchtern	XXXXXXXXXXXXXX
Limburg	XXXXXXXXXXXXXX
Biedenkopf	XXXXXXXXXXXXXXX
Hanau	XXXXXXXXXXXXXXXX
Dillkreis	XXXXXXXXXXXXXXXX
Maintaunus	XXXXXXXXXXXXXXXX
Gelnhausen	XXXXXXXXXXXXXXXX
Wetzlar	XXXXXXXXXXXXXXXX
Wiesbaden	XXXXXXXXXXXXXXXX
	XXXX

7. Held a number of conferences with Civilian Supply and the Economic Section in this detachment and U. S. Forces, European Theater, in an attempt to secure the release of some coal for school heating. Results were negative. Received advice from General Stayer at U. S. Forces, European Theater, to pick up wood stoves from redeployed tactical units. A survey was made. Results were negative, they did not have any. Schools were advised on acceptable expedients so that schools may function throughout cold seasons.

8. Secured a priority for the repair of the Staatliche Gymnasium in Wiesbaden for the purpose of roofing tile and sheet metal.

9. Reports were received from the committee on the de-Nazification of music and social sciences for the elementary schools. These reports were reviewed, approved, and put immediately into use.

10. A plan was worked out and approved by this headquarters on the reorganization of the physical-education program in the elementary schools.

11. A plan was worked out by the German school authorities and after study approved by the Education Section for the revival of a professional teachers' magazine for this area.

12. For each school proposing to reopen the following facts were investigated:

- a) Estimated enrollment by classes
- b) Political reliability of teachers
- c) Courses of study
- d) Textbooks and other teaching aids
- e) Physical condition of school buildings

III. Period of October 8, 1945 to the Present²

1. Manuscript was completed for a book of international folk songs and permission for the publication thereof secured.

2. Secondary schools in the number of 16 were reorganized in the Regierungsbezirk Wiesbaden. Nineteen vocational schools and seven *Mittelschulen* were reorganized and reopened in the Regierungsbezirk Wiesbaden. The following table shows the status of vocational-technical-trades-agricultural-commercial schools reopening:

Date	Schools for Reopening	Teachers	Students
November 15	15	74	6,505
November 20	4	6	880
December 1	99*	480*	45,105*
TARGET			

²Dec. 1, 1945.

*Estimated total by Dec. 1, 1945.

3. Youth activity committees and youth groups were formed throughout the entire Land Gross Hessen. Detailed plans for such organization were worked out by this headquarters and approved by U. S. Group Control Council. A youth activities calendar has been approved by DISCC for publication.

4. The teachers college at Weilburg was completely reorganized, all staff members selected, student body selected and screened, and final approval obtained from U. S. Group Control Council. It was to have been opened on November 12, 1945. It did not open due to the fact that a hospital unit had moved into the teachers' college building. Every means has been used to get this unit out of these college buildings but without success to date.

5. A recruiting, training, and supervising program for emergency practice teachers was organized and carried into effect to relieve the teacher shortage due to de-Nazification. Spot checks have revealed that this program is a success and that these teacher apprentices are very useful.

6. Spot checks were made throughout the region of Greater Hessen in elementary classrooms. Four important findings have resulted from these checks.

a) There is a critical shortage of all types of instructional materials.

b) The teachers on the whole are doing an excellent job of handling the various questions that arise in the classroom due to the defeat of Germany and the de-Nazification of textbooks.

c) In general there is no provision for heating this winter, but home-study plans are being worked out.

d) Good order and discipline prevails and a great eagerness to learn is manifest.

7. German officials have been directed to organize adult education groups, including university extension courses.

8. A reorganization committee has been appointed at Marburg and Frankfurt Universities and the *Technische Hochschule* at Darmstadt. The departments of medicine, philosophy, and theology have been reorganized and approved for reopening at Marburg. The medical department is reopened. Frankfurt University will shortly be ready for reopening. Approval has been obtained for the reopening of the Darmstadt Technische Hochschule (an engineering college).

9. A survey has been made of the work completed and incompletely by the various Kreis and Regierungsbezirk military govern-

ment teams, with the following important findings:

a) The requirements of military government with respect to education will have been completed by November 15, so that a functional education officer will no longer be necessary in the smaller Kreise. This fact does not hold true for the five large Stadtkreise in Greater Hessen.

a) The requirements of military government with respect to education will have been completed in the larger Stadtkreise and in the Regierungsbezirk on or before June 30, 1946.

10. Investigation was made of every priest and preacher in Land Gross Hessen as to Nazi party membership and Nazi activity. In accordance with the July *USFET Directive*, mandatory removals of clergymen were referred to their ecclesiastical superiors for consideration and action. Where no action was taken, cases were referred to Office of Military Government (U. S. Zone).

11. A survey was made of property wrongfully taken from churches by the Reich Government of the Nazi party and a report thereof made to Property Control Section, this headquarters.

12. The 965 teachers dismissed for alleged party membership or Nazi activity were re-examined to determine whether mistakes had been made and non-Nazis or usable nominal Nazis had been dismissed. Any such deserving cases found will be permitted to appeal their original dismissal to the review board at Office of Military Government (U. S. Zone).

13. Appointed a minister of education, interviewed, collected, and recommended members for the ministry of education for the Land Gross Hessen. In all, 20 potential candidates were investigated and interviewed. In all, 12 relatively strong, "politically reliable candidates were called to the attention of the new ministry.

14. An emergency plan for the selection and training of high-school teachers within the universities has been worked out and recommended to the Office of Military Government (U. S. Zone). This plan involves the use of American civilian experts in high-school teacher training.

Educators in the United States should realize that it will not be an easy task to re-educate Nazi Germany. When one of my representatives visited one of the first schools to be opened in Wiesbaden, one of the pupils of this school who had never known anything during his whole life except the Nazi ideology, said: "Whom do we hail now, we have been heiling Hitler many times a day?"

The progress of re-education will be slow, but after seeing what an indoctrination program such as the Nazis used can do to a people, it is certainly worth any effort that we can make. The re-educational program, to slowly but surely change what has been done, and lay the groundwork for a program of democratic education that will never again permit a group of gangster politicians to get such an unbelievable hold on so many millions of people, should be of value to the whole world.



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Master Lists and Storage of Equipment Used in High School Courses in Science

Clarence Wilson Greene, Ph.D.

(Concluded from January)

Storage Space Requirements

The storage area required for the items in column I (for 20 to 24 student group) approximates 2900 sq. in. However, the use of the linear method of storage of the items on the above list is the most convenient method for the instructor. The arrangement of the materials in lines on the shelves requires approximately 1000 line inches on the shelves for Group I.

For column II (for 13 to 19 students) the storage requirement approximates 2200 sq. in., or 825 line inches.

For column III (for 12 students, or fewer), the storage requirement approximates 1800 sq. in., or 675 line inches.

Storage Methods

For bottles and boxes of chemicals, the use of line storage is most convenient, as the labels on them can be read readily and it is not necessary to reach over, or remove, other items when a particular item is desired.

Method A

If the chemicals and other materials are to be stored in a stockroom, instead of in the laboratory room, an open stockroom unit of the following dimensions can be used:

	Width	Depth	Height
Over-all dimensions	47"	12"	7'0"
Inside dimensions	44¾"	10¾"	6'5"

Case should be provided with seven *adjustable* shelves and should have a back. The shelf depth of 10¾ in. makes it feasible to store some infrequently used items back of the front line storage, if desired. The adjustability of the shelves makes it possible to have such height for shelf spaces as will accommodate most efficiently bottles and boxes of different heights.

Three of the above cases will provide adequate storage for a class of 20 to 24 students, and two cases will provide for any smaller group.

It is to be noted that when the number of laboratory sections is increased in a school the number of storage cases for materials is not correspondingly increased, for the list of materials given includes both those used at the instructors' demonstration desk and at the students' tables. An addition of a single storage unit would make adequate provision for as many as three laboratory sections.

Method B

If it is desired to use closed cases that can be locked, units with *sliding* glass doors are recommended for protection of equipment and for convenience. Such units are also to be preferred when the materials are to be stored in cases in the laboratory rooms.

Experienced installation engineers of the manufacturers of laboratory furniture will recommend, upon request, efficient layouts for laboratory furniture in laboratories of various dimensions. Either of the cases described below will provide ample storage space and protect equipment from dust.

No. 1. Glazed Sliding Door Case

	Width	Depth	Height
Over-all dimensions	47"	16"	7'0"
Inside dimensions	44¾"	11"	6'5"

Provided with 7 adjustable shelves.

No. 2. Glazed Sliding Door Case

	Width	Depth	Height
Over-all dimensions	70"	16"	7'0"
Inside dimensions	67¾"	11"	6'5"

Provided with 7 adjustable shelves.

Three of the No. 1 cases, or two of the No. 2 cases, as preferred, would provide adequate storage for the largest laboratory sections.

Two of the No. 1 or No. 2 cases, or one of each, provide for 13 to 19 students.

Two of the No. 1 cases, or one No. 2 case, provide generously for a laboratory section of up to 12 students.

Storage in Apparatus Cases of Chemistry Apparatus Listed

This list of chemistry apparatus was compiled through merging all such items given on the lists of five state departments of education and three widely used textbooks and laboratory manuals in high-school chemistry. The number of each item given for each class size is the maximum number given by any of the references. As in the case of the chemicals and other materials, the amounts required for the use of students and for classroom demonstration are merged in the tabulation.

The maximum numbers of the items are listed in Column I for 20 to 24 students, in Column II for 13 to 19 students, and in Column III for classes up to 12 students.

Items marked D will generally be stored in the drawers of the apparatus cases.

ITEMS	I	II	III
D Absorbent cotton	1 lb	1 lb.	
D Alcohol lamp, 4 oz. } select.....	36	24	12
D Alcohol lamp, 8 oz. } select.....	1 sq. ft.	1 sq. ft.	
D Aluminum sheet No. 30.....	24	16	12
D Asbestos squares, 6" x 6".....			
Babcock milk test apparatus, complete with centrifuge, 12 test bottles, 6 17.6 c.c. pipettes, 6 acid cylinders and two milk testers.....	1	1	1
Balance, analytical, 200 gms. capacity, sensibility 0.1 mg., in mahogany case with glass sides and counterpoised front door			
Balance, beam, 178mm.			
Balance, Cenco hand type, 6" beam			
Balance, Cenco trip scale, 6 agate bearings, 0.1 to 10 gms. on beam, capacity 5000 gms.			
Balance, double beam, two pans	select...	6	4
Balance, hand, improved			
Balance, platform			
Balance, trip, bakelite pans, capacity 2000 gms. sensibility, 1 cg.			
Balance, triple beam, 111 gms. by 0.01 gm.			
Balance, triple beam, 100 to 0.1 gm., no weights required			
Balance, triple beam, Harvard construction, bakelite pan, capacity 610 gms., sensibility 0.05 gm., no additional weights needed			
Balance weights, 1 mg. to 100 gms. in box, forceps			
Balance weights, set of			
Balance weights, lacquered, 1 mg. to 50 gms. in wood case with lid	select...	6	4
Balance weights, adjusted to Class S of Bureau of Standards Specifications, analytical, brass in case, 1mg. to 100 gms.			
Barometer, aneroid, metric and English scales for altitude up to 3500 ft.	1	1	1
Barometer, mercurial, hg. column exposed, with electrical zero adjusting device.	1	1	1
Beakers, pyrex, 100 c.c.	36	24	12
Beakers, pyrex, 150 c.c.	36	24	12
Beakers, pyrex, 250 c.c.	36	24	12
Beakers, pyrex, 400 c.c. nested.	24	24	12
Beakers, pyrex, 600 c.c.	20	20	12
Beakers, pyrex, 1000 c.c.	6	4	
Beakers, pyrex, 2000 c.c.	6	4	
Bell, electric, 2½" gong.	1	1	
Bell, jar, tubulated top, 1 gal.	1	1	
Blast lamp for gas.	1	1	1
Blowpipes, 8"	16	16	12
Boiler, double, agateware, 2 qts. } select.....	24	16	10
Boiler, double, brass, 10 in.			

ITEMS	I	II	III	ITEMS	I	II	III
Bottles, acid, 2½ liters				Crucible tongs	24	16	12
Bottles, amber, glass for storage of light sensitive solutions, 32 oz.				Cylinders, graduated, on foot, 10 cc.			
Bottles, amber glass, screw cap with rubber bulb, 4 oz.				Cylinders, graduated, 50 c.c.			
Bottles, five gallon				Cylinders, graduated, 500 c.c.			
Bottles, narrow mouth, glass stopper, 4 oz.				Cylinders, glass, 2 x 12 inches, for home-made water softener	select...	8	6
Bottles, narrow mouth, 2 oz.				Defragating spoons, brass.....	24	16	12
Bottles, narrow mouth, 8 oz.				Dissicators, Scheibler's, 6" dia.....	6	3	1
Bottles, narrow mouth, 32 oz.				Dishes, enameled ware, 1 qt.			
Bottles, narrow mouth, 1000 c.c.	select...	160	124	Dishes, evaporating, Coors' 00A, 3"			
Bottles, narrow mouth, 2000 c.c. with 2-hole rubber stopper				Dishes, evaporating, No. 0			
Bottles, wide mouth, 2 oz.				Dishes, evaporating, Coors' porcelain glazed, 8.5 cm. dia.	select...	72	48
Bottles, wide mouth, 4 oz.				Dishes, iron (sandbath), 10 cm.			
Bottles, wide mouth, 6 oz.				Dishes, lead, 2" diameter			
Bottles, wide mouth, 8 oz., with glass stopper				Dishes, lead, 3" diameter			
Bottles, wide mouth, 250 c.c.				Electrochemical series chart.....		1	1
Bottles, vial, 15 ml.				Electrolysis apparatus			
Bottles, reagent, blown labels				Electrolysis apparatus battery jar type	select...	3	3
Bottles, reagent, Nos. 24, 5, 15, 38, 61	select...	240	160	D Emory sheets, no. 2/0.....		6	4
Bottles, reagent, wide mouth				Endiometer, Bunen's, 50 c.c., graduated in 1/10 c.c.			
Bottles, reagent, tincture				Endiometer, U-shaped, capacity 50 c.c.	select...	1	1
Boyle's Law Apparatus, adjustable funnel tube, glass stopcock iron frame mounting. Hang on wall....	1	1	1	Endiometer, graduated in 0.2 c.c., with platinum electrodes			
D Brushes, beaker				D Files, round, 4"			
D Brushes, burette				D Files, round, 5"	select...	30	20
D Brushes, camel's hair				D Files, triangular, 5"			12
D Brushes, counter	select...	48	32	D Filter paper, 4", packages			
D Brushes, funnel				D Filter paper, 1.25 cm. dia.	select...	25 pkg.	20 pkg.
D Brushes, small table, ¾" bristle				D Filter paper, 8.5 cm. dia.			12 pkg.
D Brushes, test tube				D Filter paper, 7 cm. dia.			
Bunsen burners, with wing tops, when gas is available	24	16	12	Filter pump, precision form.....		1	1
D Burrettes, plain, 25 c.c.				Fire extinguisher, to be hung up.....		1	1
D Burrettes, plain, 50 c.c., graduated to 0.1 c.c.	select...	60	40	First aid cabinet, 7½" x 9" x 2½", with accessories..		1	1
D Burrettes, G.S., 50mm. x 1/10 Kollegiate				Flasks, volumetric, 100 c.c.			
D Burrettes, Geisster's with stopcock, 50 c.c. to 0.1 c.c.				Flasks, Erlenmeyer, 125 c.c.			
D Burrettes, clamps, with check nut				Flasks, Erlenmeyer, 250 c.c.			
D Burrettes, clamps, double, Cenco	select...	30	20	Flasks, pyrex, 250 c.c.			
D Burrettes, fittings, sets of, tips, tubing pinch cocks				Flasks, distilling, 250 c.c.	select...	48	32
D Candles, sets of 12 in box.....	12 sets	12 sets	5 sets	Flasks, separatory with glass stopper, 250 c.c.			20
D Charcoal blocks, 12 in box.....	2 boxes	1 box	1 box	Flasks, volumetric, 500 c.c.			
D Charcoal sticks, 11 x 2.5 x 1.6 cm., sets of 12.....	2 sets	1 set	1 set	Flasks, pointer tester, Cleveland open cup simple form			
Chart of the atoms, lithographed in 6 colors, showing 40 atomic properties including atomic symbol, atomic weight, atomic number, etc. Size 42" x 64"....	1	1	1	D Forceps, laboratory, 5"			
Chart of the metals, 28" x 42"....	1	1	1	D Forceps, steel, heavy, 5"	select...	24	16
D Clamps, condenser				Funnels, glass, 6.5 cm. dia., 6.5 cm. stem			12
D Clamps, condenser, large size				Funnels, glass, 7.5 cm. dia.			
D Clamps, cylinder				Funnels, glass, 12.5 cm. dia.			
D Clamp holders, condenser				Funnels, glass, 15 cm. dia.			
D Clamp holders, right angle	select...	48	32	Funnels, separatory, 60 c.c.	select...	72	48
D Clamp, Mohr's 2 inch				Funnels, tubes (thistle) pyrex, 30 cm. x 40 cm.			30
D Clamp, Mohr's pinch				Funnels, tubes, thistle tops, 40 cm.			
D Clamp screw, side opening				Gas generator, Kipps, 500 c.c.			
D Clamp, Stoddard's test tube				Gas measuring tubes, 50 c.c.	select...	24	16
D Cobalt glass, pieces, 4" x 4"				Gas measuring tubes, 100 c.c.			12
D Cobalt glass, plates, 5 cm. x 5 cm.				D Gauze, wire, 5" x 5", asbestos center			
D Cobalt glass, plates, 7.5 cm. x 7.5 cm.	select...	72	48	D Gauze, wire, 6" x 6"	select...	24	16
D Cobalt glass, plates, 4" x 4"				D Gauze, Cu, 80 mesh, 12" x 12"			12
D Cobalt glass, plates, blue				D Glass beads, hollow.....		¼ lb.	¼ lb.
D Cobalt glass, plates, red				D Glass cutters.....		2	1
Combustion boats, Coors porcelain, 7.6 cm. x 1.1 cm..	5	5	3	D Glass plates, 4" x 4"		48	32
Combustion tubes, dia. 1.5 cm., 30 cm. long.....	6	6	3	D Glass rods, 4mm.			20
Condensers, 40 cm. long				D Glass rods, 4-5mm.			
Condensers, bakelite fillings, 40 cm.				D Glass rods, 5mm.			
Condensers, glass, molded rubber end caps, 40 cm. long				D Glass rods, 6" x 3/16" (stirring)			
Condensers, Kimble improved with treaded bakelite nut and washer pocket, 40 cm.	select...	24	16	D Gold leaf, book of 25 leaves.....		1	1
Condensers, Liebig				D Graduates, cylindrical, 25 c.c.			
Condensers, Liebig, 15"				D Graduates, cylindrical, 50 c.c.			
Condensers, straight jacket, 40 cm.				D Graduates, cylindrical, 100 c.c.			
Conductivity apparatus				D Graduates, cylindrical, 250 c.c.			
Conductivity of solutions apparatus	select...	2	1	D Graduates, cylindrical, 500 c.c.			
Conductivity of solutions tester (McPherson)				D Graduates, cylindrical, 500 c.c. x 5 c.c. graduated up & down			
D Corks, assorted				D Graduates, cylindrical, 1000 c.c.			
D Corks, assorted, No. 0-11				Heaters, electric, Cenco, hot cone, 115 volts.....		6	4
D Corks, assorted, No. 13-16				Hydrometers for both light & heavy liquids			
D Corks, assorted, No. 3-16	select...	300	200	Hydrometers for heavy liquids			
D Corks, No. 7, 8, 9, 10, 12				Hydrometers for light liquids			
D Corks, No. 3 to fit 2-oz. bottles				Hydrometers, Universal	select...	16	10
D Cork borers, sets of 6				Hydrometer jars, 2" x 12"			6
D Cork borers, brass, Nos. 1-6	select...	3 sets	2 sets	Hydrometer jars, 2" x 15"			
D Cork borers, 4, 6, 7, 8, 9, 10, 12, 15mm.				Hydrometer jars, cylindrical, 500 c.c.			
Crucibles, No. 0 with covers				Jars, waste, stoneware, with cover, 2 gal.	select...	6	4
Crucibles, No. 1 with covers	select...	36	24	Jars, waste, stoneware, with cover, 4 gal.		1	1
Crucibles, Skidmore				D Labels, book of over 600, Am. Chem. Society revisions	select...	7	5
				D Labels, gummed, No. 201, boxes of			2
				Lactometer, N. Y. Board of Health.....		1	1
				D Litmus paper, blue.....		1 quire	1 quire
						1 quire	1 quire

	ITEMS	I	II	III	ITEMS	I	II	III		
D	Litmus paper, red.....	1 quire	1 quire	1 quire	D	Splints, wood, 600 to package.....	1	1	1	
	Lodestone.....	1	1	1	D	Sponges, laboratory.....	24	16	12	
	Magnet, bar, rectangular, polished steel, 15 x 1.9 x 0.7 cm.....	2	2	2	D	Spoons, horn, with spatula handles, 10 cm.....	select	24	16	12
	Magnet, horseshoe, 4", with pole pieces.....	6	4	2	D	Stencils, for drawing figures.....	24	16	12	
	Magnifiers, tripod.....	8	5	4	D	Still for distilled water, 110 volt, 1 qt. per hour.....	select	1	1	1
D	Medicine droppers.....	24	16	12	D	Still for distilled water, complete with burner, ½ gal. per hour.....	select	1	1	1
	Meter sticks, maple, brass tips, Eng. & Metric.....	6	5	4	D	Stop watch.....	1	1	1	
	Metric chart, Bureau of Standards form.....	1	1	1	D	Storage battery, 95 ampere hours.....	1	1	1	
	Microscope, compound, one eye piece, two objectives, double circular nosepiece, all in case.....	1	1	1	D	Thermometers, 10 deg. to 110 deg. C.	12"	long		
	Microscope cover glasses No. 2, 1.8 cm.....	1 oz.	½ oz.	¼ oz.	D	Thermometers, 10 deg. to 110 deg. C.	select	24	16	10
	Microscope slides, noncorrosive, 3" x 1".....	1 box	1 box	1 box	D	Thermometers, 10 deg. to 110 deg. C.	12"	long		
	Mortar and pestle, iron, pint.....				D	Thermometers, 0 deg. to 200 deg. C.	select	4	3	1
	Mortar and pestle, Coors' porcelain.....				D	Thermometers, 10 deg. to 150 deg. C.	24	16	12	
	Mortar and pestle, Coors' porcelain, No. 1, 4" dia.....				D	Thermometers, 10 deg. to 220 deg. C.	select	24	16	12
	Mortar and pestle, Coors' porcelain, 135 c.c.....	select	24	16	D	Thermometers, 5 deg. to 360 deg. C.	12"	long		
	Mortar and pestle, Coors' porcelain, 8 cm.....				D	Thermometers, 30 deg. to 650 deg. F.	select	24	16	10
	Mortar and pestle, Wedgwood, 4" No. 00.....				D	Tongs, crucible, 9".....	1	1	1	
	Nickel catalyst, 2 lb. can.....	1	1	1	D	Triangles, pipetstem, 2".....	24	16	12	
	Osmosis apparatus, thistle tube form, membrane.....	1	1	1	D	Tripods, 6" for alcohol lamps, if used.....	select	24	16	12
	Oven, drying, gas, cu., 8" x 10" x 8".....				D	Tripods, 5" by 9" high.....	select	24	16	12
	Oven, drying, gas, cu., 6" x 8" x 6".....	select	1	1	D	Tripods, 5" by 8" high.....	select	24	16	12
	Oven, drying, electric, 115 volt.....				D	Tubes, calcium chloride, 4" long.....	24	16	12	
	Petri dishes, 7.5 cm. x 1 cm.....	24	16	12	D	Tubes, calcium chloride, 6" long.....	select	12	8	4
	Pinchcocks, large.....				D	Tubes, combustion, 45 x 1.9 cm.....	24	16	10	
	Pinchcocks, screw cap } select.....	24	16	12	D	Tubes, thistle, 30 cm. stem.....	12"	long		
	Pipettes, volumetric, 1 c.c.....				D	Tubes, test, pyrex, 7.5 cm. x 1 cm.....	24	16	12	
	Pipettes, graduated, 5 c.c. x 1 c.c.....	select	36	24	D	Tubes, test, pyrex, 15 cm. x 1.8 cm.....	select	24	16	12
	Pipettes, volumetric, 10 c.c.....	select	36	24	D	Tubes, test, pyrex, 15 cm. x 2 cm. thick wall.....	select	360	240	120
	Pipettes, medicine dropper.....				D	Tubes, test, pyrex, 5" x ¾".....	12	8	3	
	Pipettes, Mohr's, 25 c.c.....				D	Tubes, test, pyrex, 6" x ¾" ignition.....	24	16	10	
	Platinum loops, in glass handles.....				D	Tubes, test, pyrex, 6" x ¾".....	24	16	10	
	Pneumatic troughs, Armco Iron.....				D	Tubes, test, soft, 6" x ¾".....	24	16	10	
	Pneumatic troughs, glass demonstration form.....	select	24	16	D	Tubes, test, soft, 4" x ¾".....	24	16	10	
	Pneumatic troughs, glass sides, base of heavy slate for demonstration, 12" x 6½" x 8½".....	select	24	16	D	Tubes, test, soft, 6" x 1".....	24	16	10	
	Porcelain boats, 0.7 cm. x 6 cm., No. 1.....	24	16	12	D	Tubes, test, soft, 8" x 1".....	24	16	10	
	Power unit, gives 2.5 to 10.5 volts, d.c., and 6 to 22 volts a.c., operation on 110 volts, a.c.....	1	1	1	D	Tubes, test, pyrex, 20 cm. x 2.5 cm.....	24	16	10	
	Racks, test tube, 13 tubes & draining pins.....	24	16	10	D	Tubes, test, pyrex, graduated 25 cc.....	24	16	10	
	Reading glass.....	1	1	1	D	Tubes, test, 30 cm. x 2.5 cm.....	24	16	10	
	Retorts, pyrex, glass stoppered, 4 oz.....				D	Tubes, U, 6".....	12"	long		
	Retorts, pyrex, glass stoppered, 5 oz.....	select	24	16	D	Test tube brushes.....	12	8	3	
	Retorts, pyrex, glass stoppered, 10 oz.....	select	24	16	D	Test tube holders, wire clamp.....	24	16	10	
	Ring stands, with ring & burette clamp.....				D	Tubing, glass, 6mm. dia.....	24 lb.	16 lb.	10 lb.	
	Ring stands, with 3 rings.....				D	Tubing, glass, 15mm. bore, 30 cm. long, 18 cm. wall.....	2 lb.	2 lb.	1 lb.	
	Ring stands, base 5" x 7", 20" rod.....	select	24	16	D	Tubing, glass, 5 to 8mm. dia.....	5 lb.	3 lb.	2 lb.	
	Ring stands, 3", 4" & 5" rings.....				D	Tubing, rubber, 3/16", ¼" or ¾".....	72 ft.	48 ft.	36 ft.	
	D	Rubber stoppers, assorted, Nos. 2/0 to 8			D	Viscometer, Saybolt, 115 volt.....	1	1		
	D	Rubber stoppers, 1 hole to fit ¾" test tube.....			D	Viscometer, receiving flasks, 60 c.c.....	1	1		
	D	Rubber stoppers, 1 hole to fit 15 cm. hard glass tube.....			D	Washington School Collection of Rocks & Minerals, 20 rocks & 20 minerals labeled in case.....	1	1	1	
	D	Rubber stoppers, 1 hole, assorted Nos. 1, 3, 4, 5, 7, 8			D	20 rocks & 20 minerals labeled in case.....	1	1	1	
	D	Rubber stoppers, 1 hole, No. 1			D	Watch glasses, 2½", 3", or 3½".....	96	64	24	
	D	Rubber stoppers, 1 hole, No. 2			D	Water bath, cu., 5" in diameter.....	8	5	1	
	D	Rubber stoppers, 1 hole to fit combustion tubing.....			D	Weighing bottle, regulation form, 5 cm. x 2.5 cm.....	2	1	1	
	D	Rubber stoppers, 1 hole to fit No. 3			D	Weights in blocks, lctg. to 20 gms.				
	D	Rubber stoppers, 1 hole to fit No. 4			D	Weights, iron on holder, 10 gms. to 500 gms.				
	D	Rubber stoppers, 1 hole to fit No. 5			D	Weights, slotted in holder, 10 gms. to 500 gms.	0	6	2	
	D	Rubber stoppers, 1 hole to fit No. 6			D	Wire, bare, cu., No. 16, 4 oz. spools.....	3	2	1	
	D	Rubber stoppers, 1 hole to fit No. 8	select	180	120	D	Wire, bare, cu., No. 18, 4 oz. spools.....	1	1	1
	D	Rubber stoppers, 1 hole & 2 hole, Nos. 1-6			D	Wire, bare, cu., No. 20, 4 oz. spools.....	3	2	1	
	D	Rubber stoppers, 2 hole, assorted numbers			D	Wire, bare, cu., No. 24, 4 oz. spools.....	3	2	1	
	D	Rubber stoppers, 0, 1, 3, 4, 5, 7, 8			D	Wire, bare, cu., No. 28, 4 oz. spools.....	3	2	1	
	D	Rubber stoppers, 2 hole, No. 1			D	Wire, iron, No. 28, spools.....	3	2	1	
	D	Rubber stoppers, 2 hole, No. 3			D	Wire, picture, No. 0, pkg. } select.....	1	1	1	
	D	Rubber stoppers, 2 hole, No. 4			D	Wire, picture, No. 1, rolls } select.....	1	1	1	
	D	Rubber stoppers, 2 hole, No. 5			D	Wire, platinum, No. 24 } select.....	30"	20"	6"	
	D	Rubber stoppers, 2 hole, No. 6			D	Wire, platinum, No. 28 } select.....	1 skein	1 skein		
	D	Rubber stoppers, 2 hole, No. 8								
	D	Rubber stoppers, 2 hole for 16 oz. bottle								
	D	Rubber stoppers, 2 hole for 8 oz. bottle								
	D	Rubber stoppers, 2 hole for 125 c.c. bottle								
	D	Rubber stoppers, 2 hole for 250 c.c. bottle								
	D	Rubber stoppers, 2 hole for 500 c.c. bottle								
	D	Rulers, English & Metric, 12"	24	16	10					
	D	Sand baths, iron, 6" dia.	24	16	4					
	D	Sand baths, shallow, 4"	select	24	16					
	D	Scissors, 3" blades	1	1	1					
	D	Sheet, cu., No. 30	3 sq. ft.	3 sq. ft.						
	D	Sheet, lead, 1/64" thick } select.....	2 sq. ft.	2 sq. ft.						
	D	Sheet, lead, 1/32" thick } select.....	2 sq. ft.	2 sq. ft.						
		Sodium spoon with ramrod.....	1	1	1					
		Spatula, horn, 15 cm.....								
		Spatula, steel, wood handle 3½" blade } select.....	24	16	10					
		Spectroscope, Bunsen Kirchhoff type } select.....	2	2	2					
		Spectroscope, direct vision } select.....	1	1	1					
		Sphinctaroscope, 4 cm. high.....								

Suggested Methods for Storage of Apparatus for Chemistry

It is strongly recommended that the apparatus be stored in closed sliding door apparatus cases. The following are suggested types of such cases.

No. 3 Sliding Door Apparatus Case

	Width	Depth	Height
Over-all dimensions	47"	22"	7'0"
Inside dimensions	44¾"	17"	6'5"

Provided with adjustable shelves and with lock.

No. 4 Sliding Door Apparatus Case

Same as No. 3 except that it is 70" wide.

No. 5 Sliding Door Apparatus Case with Cupboard

	Width	Depth	Height
Over-all dimensions	49"	24"	7'0"
Upper member with shelves	47"	16"	47"

Lower member, double cupboard.

No. 6 Sliding Door Storage Case with 7 Drawers

	<i>Width</i>	<i>Depth</i>	<i>Height</i>
Over-all dimensions	48"	24"	7'0"
Upper member, with shelves	47"	16"	47"
Lower member	47"	23"	37"
3 drawers, each	21"	18"	6 1/4"
2 drawers, each	21"	18"	23 1/4"
2 drawers, each	44 1/8"	18"	6 1/4"

No. 7 Sliding Door Storage Case with Two Double Cupboards and 4 Drawers

	<i>Width</i>	<i>Depth</i>	<i>Height</i>
Over-all dimensions	8'0"	24"	7'0"
Upper members	94"	16"	47"
Lower members	94"	23"	37"
4 drawers, each	21"	18"	6 1/4"
2 double cupboards, each	45 3/8"	20"	22 1/4"

1. For Group I (20-24 students) a choice of following units is suggested:

(1) Two No. 3 cases with 5 adjustable shelves in each (adjusted for one 28" height storage space, one 18" height storage space, one 8" height storage space, and three 6" height storage spaces in each unit) combined with one No. 6 case with 4 adjustable shelves (providing four 8" height storage spaces and one 7 1/2" height storage space) and with 7 drawers.

(2) If some cupboard space is desired, use one No. 3 case with 5 adjustable shelves (providing one 28" height storage space, one 8" height storage space, and three 6" height storage spaces) combined with one No. 7 case with 4 adjustable shelves (providing one 12" height storage space, two 8" height storage spaces, and two 6" height storage spaces) and 4 drawers and 2 double cupboards.

2. For Group II (13 to 19 students) a choice of the following is suggested:

(1) One No. 4 case with 5 adjustable shelves (providing one 28" height storage space, one 18" height storage space, one 8" height storage space and three 6" height storage spaces) combined with one

No. 6 case with 4 adjustable shelves (providing for 8" height storage spaces and one 7 1/2" height storage space).

(2) One No. 3 case, with 5 adjustable shelves, combined with one No. 5 case, with 4 adjustable shelves, and one No. 6 case, with 4 adjustable shelves.

3. For Group III (up to 12 students):

One No. 3 case, with 4 adjustable shelves, combined with one No. 6 case, with 4 adjustable shelves.

If it is feasible to do so, it is very desirable to include at least one No. 6 case in any combination of cases selected because of the great convenience provided by storage capacity in drawers for small items.

Concluding Remarks

It is apparent that other combinations of the cases described could be made to provide adequate storage facilities.

Perhaps the statement should be repeated that the dimensions of the items of equipment listed in this survey were determined. The shelf heights given, the line storage capacity, cupboard capacity, the shelf area storage capacity, and the drawer storage capacity recommended are in conformity with the results arrived at in the survey.

Perhaps at a later date a discussion will be written on the desirable characteristics of storage units and their placement in laboratory layouts. Suffice it to say that the manufacture of high grade storage units that will properly protect scientific equipment, remain in good condition with varying atmospheric conditions and continue to make an attractive appearance through the years is a matter for specialists such as are found on the staffs of leading manufacturers of laboratory furniture for high schools, colleges, universities, and other institutions engaged in scientific work.

An Important Opinion Study —

Postwar School Building Construction Trends

H. W. Schmidt¹

In a late issue of this magazine the writer discussed the general aspects of the postwar questionnaire replies received some months ago, and we are now in a position to give some detailed information about the *trends* of the future school-building programs as expressed by administrators, school-board officials, architects, and others who have filled out the question sheets. Among these is a selected group of state-departments-of-education officials whose specialty is the school-building field and who have been willing to give their opinions as a generalization of trends in their own states — differing in some respects from the more "local" opinions which, of course, are in the majority. We shall present these state trends a little later.

The trend questionnaire covered 14 major items which in turn called for judgments on 76 subitems. Replies were, in general, specific and few blanks were found, quite in opposition to the answers of the first set calling for opinions along quantitative lines, among others. Possibly the reader is not interested so much in the fact that 15,000 secondary clocks, several thousand projectors, over 250,000 opera chairs for auditoriums, millions of chairs, etc., are required, as he is in finding out what the other fellow is doing in the way of construction features and selection of equipment. We have answers for both, and this paper will deal in part with certain types of trends in construction.

In the first place, there was nothing to indicate any revolutionary trends in general construction, but there has been a shift in *some*

details aside from the fact that we are still building of brick and stone and steel and cement; so far nothing has appeared which will take the place of these materials for durability and stability, at least so far as school buildings are concerned. Prefabrication? No evidences in the school field as yet, except for certain items which have always been so treated. We are discounting the semipermanent or special building types, but even these have not been mentioned by prospective builders. So it seems evident that we may settle down to good solid constructions as of old.

As to arrangements, we have no factual material on hand nor do school-building plans which have been examined lately give much of any evidence that revolutionary changes in this respect are impending. However, by implication and also by direct evidence we are planning for additional spaces for certain activities which of late years have received recognition as contributing to the development of the finer sensibilities and emotional life of the youth — large areas devoted to music in all its branches, the fine arts, photography, dramatics, etc., including also varied types of vocational work as well as those devoted to the newer kinds such as plastics, electronics, aviation, etc. The "Youth Movement" will get a chance to expand and prove itself and its future, at least in terms of spaces set aside especially to contribute to this phase of modern education. And so we might continue along this line for quite a spell.

As to the externals of school buildings, here likely will be the greatest change. The contemporary press is full of contemplated

¹Madison, Wis.

changes in design—some of which undoubtedly is questionable, some adapted best only to certain localities, some exhibiting the "hobbyhorse" basis, and others to a marked degree, functionalism. Modern fenestration will also contribute much to this change. But enough of this discussion which in part has been induced by a rather intensive study of the material sent in. So let us come down to the definitely objective and give the reader some specific information fundamental to the whole problem of postwar school-building planning as based upon the replies received.

The number of gymnasiums to be provided is an indication in the positive direction, so far as physical education is concerned—Or is it the more prescriptive "physical-fitness" program that is involved? The second place is held by the auditoriums which, it is hoped, shows a leaning toward a more extended use of the school by the public and the community at large. Otherwise one might question the involvement of \$100,000 to \$450,000 for such a structure for purely in-school purposes. This fact has been impressed upon us by such voluntary statements as, "To be used by the community," "for the parents," etc. Similar comments were made for the use of the gymnasium.

In this connection the writer was definitely unfavorably impressed by too many statements such as: "This gym (very large) will be for the boys; the little one we now have will be used for the girls." Why? Our high-school enrollments show a definite preponderance of girls and yet, a "little gym" is good enough for them. Are our girls so much better in physical fitness than the boys? Maybe we need an Amazonian war corps to show us the truth, as we discovered the physical deficiencies of our boys in both world wars. Oh yes, we know the various arguments for the male side of our youth—how about the distaff side?

There is much to be commented upon, so far as implications such as those already stated, are concerned, that one might spend hours in a subsidiary study and analysis of the replies received. Only a few factors have been mentioned, but enough has been shown to judge of some of the more important educational trends to be reflected in our future school-building programs.

It is to be remembered that the authors of the replies were under no inhibitions and were free to express their opinions and experiences—they are so considered. How valid these expressions are must be left to the judgment of the reader; no doubt there will be changes incident to the actual construction program and the offerings of the market. But we are not seers, and the crystal ball is still dimmed by the fog of uncertainties. At any rate we will present, "what is."

The main construction features have been treated under several headings which follow. As stated previously the exterior features have only been touched upon; that is a matter of design and even trends are not at present well developed if we except the one-story building so frequently brought into the limelight. Even here we are not overly sure of our ground. The ultramodern and functional trends are apparently somewhat on the wane unless one is a disciple of the Wright school, but so far even he has left the schools alone—we hope.

School Floors

One item which called for expression was that of floor types to be used or called for in the different room classifications. Here we were surprised to find 61 per cent wanted wood in the classrooms (no special geographic distribution was in evidence, south, east, west, and north had the same ideas about this.) The asphalt-tile feature gave a 28 per cent and the linoleum floors came in with an 11 per cent record; one asked for a cement floor, and another called for a tile floor. Why, we do not know.

Study halls came in with an 84 per cent preference for wood, while gymnasiums gave a 93 per cent score for the same material. (A few specified "wood blocks.") The former areas dropped the asphalt tiling to 14 per cent, and only 1 per cent mentioned linoleum; the gymnasiums came in with 3 per cent for the latter material and 4 per cent with miscellaneous flooring—including cement! An error? Maybe, but there were several such.

Libraries gave the tiling and linoleum a boost to 25 and 18 per cent respectively. One might suspect the linoleum would have made a better showing, but wood has it again with a 57 per cent rating. Auditoriums show up with 68 per cent in favor of wood (some called

for blocks); linoleum dropped to 5 per cent and asphalt tiling came in with 17 per cent while cement held the middle ground here with 10 per cent.

Cafeterias and kitchens became of record with a little over one-third preference for wood floors, 27 per cent liked asphalt tile for the cafeterias, 20 per cent felt cement was satisfactory, while linoleum and terrazzo brought up the rear. Kitchen floors, aside from wood, were to be covered with other materials already mentioned in about the same ratio for cafeterias as for the shops, home economics suites and laboratories; all called for wood floors in the ratio of 54, 55, and 62 per cents, with wood blocks called for in some of the shops; 40 per cent of the latter also wanted cement floors. The homemaking quarters also called for floors with 23 per cent in favor of tiling and 17 per cent registered for linoleum. Laboratories also expressed 30 per cent liking for asphalt tiling.

Toilet rooms, of course, came in with 54 per cent for terrazzo or ceramic tile and, surprising enough, 31 per cent declared in favor of cement. We had thought that cement was virtually out of consideration, but apparently not; even wood floors showed up with 5 per cent. Asphalt tiling was designated by 10 per cent of those replying.

The record for corridors and stairs was interesting: 49 per cent for terrazzo, 12 and 32 per cent for wood and tile respectively; 6 per cent were for cement and 9 per cent for linoleum. Several called for various materials with differing borders.

The preponderance of wood in general was no surprise, but the lack of enthusiasm for linoleum was. However, it appears that kindergartens exhibited a trend toward the latter, about equal to that for asphalt tiling. In this connection one may mention the investigation of the U. S. Bureau of Standards which carried on a series of tests on various flooring materials and published the results in Bulletin RP1046. Also Bulletin No. 8, on Schoolhouse Floors, published by the NASBO is worth reading. In discussing the results of this study with many of those interested it was stated that since the tests were made manufacturing processes for a good many flooring types had made advances such as that the results might be different today. But so much for the trend in flooring.

Wall Finishes

Smooth or putty plastered walls (and ceilings, where acoustical materials are not mentioned) showed up with a very high percentage favoring this material. Study halls, kitchens, and shops have a 70 per cent record, while classrooms top the list with 84 per cent; other areas give preferences between these two limits. San-float type of plaster comes in quite strong; study halls head the list with 25 per cent, and the 9 per cent low is allocated to the toilets, with tile walls the same and masonry coming in with 6 per cent.

Masonry walls, finished and unfinished, were also mentioned, and auditoriums and shops each gave 16 per cent as a trend. Other areas lie below the 10 per cent limit, with classrooms, study halls, and libraries recording 4, 5, and 3 per cent respectively; corridors and gymnasiums gave 5 and 8 per cent preferences. It thus appears that a trend toward unfinished masonry walls is not well established. One comment frankly stated that such walls were used as an economy measure and would be "properly" finished later; another one designated them as "factory walls," out of place in an educational institution, and still a third one gave the opinion that "they are cold, both visually and from the angle of insulation." The writer is in accord with these statements.

Ceiling Finishes

These surfaces are designated to be both plastered and provided with acoustical materials, but the latter are by no means universally called for, even in areas where experience has dictated such treatment, such as typing rooms, etc. So far as materials are concerned tiles of various types come in very strong as compared with acoustical plasters. The largest percentage of the latter is recorded as 11 per cent for libraries; then a rapid descent takes place until study halls, toilets, and kitchens come in last with a bare 1 per cent. Classrooms and gymnasiums each score a 9 per cent preference.

The acoustical tile treatment is on a different plane, with libraries in the 33 per cent group, while gymnasiums, laboratories, auditoriums,

and cafeterias hover around the 30 per cent limit. Corridors call for a 38 per cent tile application while classrooms come down to the 29 per cent mark. The rear guard is represented by the toilet-room areas, with a 12 per cent trend in this direction. About one third of the typing rooms are to be acoustically treated, and the music rooms show up with only a 50 per cent ratio, rather surprising.

As a whole the trends in the direction of reducing the noise level in our schools is encouraging, and no doubt will show up at an increasing rate as its advantages are realized. One tendency has been observed by the writer in connection with field visits in many schools and that is the tendency to overcompensate in this direction, especially in spaces devoted to music and even in those devoted to speech work and dramatics. When the reverberation period is reduced too much, the brilliancy of the music is reduced to a point where the work in hand is actually banned and speech is likely to be "flattened out" and thus lose effectiveness. These conditions are often due to improper study of the problem or none at all and result in just applying acoustical materials by "guess and b'gosh." The inference should be obvious.

Fenestration of Rooms

Here, as in other construction details, we were not surprised at the trends exhibited for the type of windows and the ratio of glass area to the floor area served. In the latter case we find that just half of those replying are calling for a 1 to 4 ratio, but a close finish in this race is given the 1 to 5 ratio, for which 42 per cent record their preference; the 1 to 6 ratio brings up the rear with only 8 per cent. The larger ratio, of course, entails some architectural and structural problems which can readily be met.

As to the type of windows, the double-hung wood sash is given a very large margin over other types, 87 per cent. With the suspected inroads made by steel sash and glass blocks one might have expected a different trend. Auditoriums head the list with 91 per cent, while classrooms indicate their preference for wood sash with 85 per cent; corridors gave the lowest figure with 68 per cent, but make this up by calling for 31 per cent in favor of glass blocks.

Surprising enough, steel sash shows the greatest gain in study halls with 12 per cent, followed by the kitchens with 11 per cent, while classrooms list a 10 per cent trend; the auditorium is last on the list with a 4 per cent entry.

Glass blocks do not appear, as yet, as influencing the trend in fenestration very much; aside from corridors, already mentioned, no area appears to call for such treatment in excess of 31 per cent of those reporting, and that was mostly for shops, while gymnasiums call for 25 per cent. Classrooms have relegated this to 11 per cent and other areas dropped below this.

As a good deal of objection has been registered against the use of glass blocks, as a whole, in classrooms, for psychological as well as physical reasons, administrators and others were asked whether the trend was for some clear glass window areas in classrooms where glass blocks were indicated. The responses were encouraging along this line, as 70 per cent stated a trend in this direction; but similar responses for other spaces were insignificant.

Closely connected with this subject of fenestration was the use of "air insulated double glass." Here the responses were very few; this is probably due to the very new development of this feature which so far has had to rely upon an advertising campaign for bringing it to the attention and knowledge of those interested in school construction. At that an 8 per cent response for the use of this type of glass in schools has some significance, especially in view of the above.

Heating and Ventilation

Heating and ventilation, the systems to be used and equipment connected therewith seem to be slightly foreign to the administrator to judge by the reports. "This should be left to the architect or engineer," more than one administrator stated or intimated. Maybe so, so far as the purely technical features are concerned, but it should make a difference to a school official whether he is getting a hot-air or a steam job, or unit ventilation or what not.

Steam has it almost 100 per cent over the warm-air-furnace jobs —

97.5 vs. 2.5 per cent, the latter being mostly based upon replies from the southern states, though even here we also find the steam plant favored somewhat. But when it comes to differentiating between the different systems of ventilation and air distribution, we find blank spaces galore. Direct radiation only, that means a lack of forced ventilation per se, gave us a 3 per cent reply; then comes the split system with an 18 per cent score, while the unit ventilation type heads up with a 28 per cent response. Fifty per cent shied away from a reply. So it's up to the engineer?

The geographical or temperature belts show their influence in this direction, and interesting enough, the responses from colder areas are much more detailed and technical than most others. Possibly this is quite in keeping with the situation — to cope with severe winter weather engenders more than a speaking acquaintance with the factors involved on keeping a school building warm, comfortable, and well ventilated.

The cast-iron boiler trends show up to the extent of 50 per cent, while the steel boiler installations are satisfied with getting 45 per cent representation; then this item ends up with warm-air furnaces, special oil burners, etc. Quite a few schools intend to use hot water which, of course, definitely influences the ventilation problem. Coal as a fuel, of course, heads the list, but 20 per cent expect to use oil and gas, and one plans for sawdust (Eugene, Oregon, is the unique example). Wood is out of favor. But note, only 75 per cent of those who will use coal will install stokers; we were under the mistaken impression that 95 per cent would be nearer the mark.

Artificial Lighting

Though the trends in artificial-lighting systems come more directly under the heading of equipment, yet we cannot forbear to pass up the problem in this article — it seems so logical to have it follow heating and ventilation. Or isn't it? At any rate, our responses are grouped in two series. The first questionnaire gave a chance to respond to the question whether, among others, the direct system of lighting was favored, and to our surprise 30 per cent so indicated. That seemed out of line with present-day practice, so the second set of blanks gave a chance to respond to another idea because it was thought that "direct" was misinterpreted. Evidently this was the case as the replies indicated the following trends: Indirect 40 per cent, semi-indirect 50 per cent, and diffuse illumination 10 per cent.

Let us finish this phase by stating that 72 per cent favored manual control of the artificial-lighting system, and only 28 per cent felt that automatic control was to be looked for. Fluorescent lamps have made a considerable dent into the situation here, as 59 per cent look toward that type and 41 per cent feel the filament lamp is still very much in need.

So far as the intensity of illumination is concerned, a definite shift toward higher foot-candles was evident as a trend, and a few even went beyond the generally accepted 50 foot-candles; the latter was represented by 10 per cent of those replying. There the scale drops to 40, 30, and 20 foot-candles, with respective replies of 25, 37, and 27 per cent; the median hovers around the 30 foot-candle level — a marked improvement over the practice of even six or seven years ago. The water of knowledge will eventually wear away the stone of indifference, if one is permitted to paraphrase a little.

In conclusion we give the gist of the state trends as shown by the replies of quite a few state department officials. In general, the state officials are in accord with the local replies with a few exceptions. For example, the warm-air type of heating is favored more than that reported by local authorities and the same is true of unit ventilation. Acoustical treatment gives gymnasiums a boost; likewise the corridors, as well as "special rooms," but the classrooms bring up the rear. Glass blocks give corridors and stairways an 80 per cent "go signal," and again the classrooms have the "red" against them. The illumination is in line with the local trends, and this is also true of floorings and other construction details previously discussed.

Well, this seems to be a good place and time to end the second article on "Trends." But we still have a good deal of interesting and pertinent information to pass on to the reader — we hope to do so in future issues of this magazine.

Fairness to the Teacher on Trial —

School-Board Hearings

Clyde B. Moore¹

School-board hearings often try the souls of men—not only those of teachers and members of a board of education, but in some cases many members of the community are greatly disturbed. A school-board hearing is rarely an inviting experience to anyone concerned with the responsibility of maintaining a school system. It usually means an experience which rests heavily upon board members and teachers. How sharp is the contrast with the careful development of an improved salary schedule which is finally approved by official action and announced to the teaching staff! As board members meet teachers and public-spirited citizens after such an action, there is a deep satisfaction within and a feeling that a good deed has been done for the general welfare of the community. There is a warm afterglow of satisfaction which the busy board member cherishes. This is not true in the case of most school-board hearings. They rarely give a feeling of high constructive achievement. At best they leave little more than a sense of justice, possibly unduly delayed, and the satisfaction of having courageously exercised a necessary function for the welfare of the schools. There is little by way of a happy feeling of accomplishment, but it is a matter that every board of education must be prepared to face frankly and with good grace.

The homely principle—an ounce of prevention is worth a pound of cure—has few more appropriate applications than in the matter of school-board hearings. But in spite of wise policy-making and sound preventive measures, hearings are sometimes necessary, and boards of education, if they are to discharge their trust in good faith, must hold them—and in proper manner. It is this latter point which motivates this critique and review, for there has recently come from the press (October, 1945) a significant bulletin dealing with *Essentials of a Proper School-board Hearing*.²

How to Meet Legal Requirements

This bulletin is noteworthy in a number of respects. It is an outgrowth of the efforts of a national committee on tenure and academic freedom and has been prepared by the NEA Research Division. It has emerged in the light of persistent trends to provide competent teachers with security of tenure and because of the numerous difficulties in the proper administration of such tenure laws. Furthermore, it has been influenced to no mean degree

by the unhappy aftermaths of *improper* school-board hearings which have only served to create embarrassment to boards and teachers and to thwart a just and honorable step which at times must be taken for the common good.

The bulletin is obviously limited in details, but more than a score of illuminating citations are made and the materials are well organized for the convenience of boards of education and their administrative officers. It surveys the trends in the development of administrative law as it has come to exist in the functioning of boards of education. Parallels are drawn between school boards and other boards and officials operating under administrative law who may be responsible for hearings of a quasi-judicial nature. It traces the trend in court decisions growing out of school-board hearings and suggests guiding principles in procedure. The committee responsible for the report reaches the conclusion:

From the report it should be possible for school boards to ascertain how best they can meet the requirements for a full hearing; and teachers who are faced with tenure hearings may know what to expect as their legal rights.

Emphasis is given to the fact that a school board is an administrative board, and as such is a part of the administrative branch of government. It is pointed out however that school boards usually have quasi-legislative (rule-making) power, and sometimes quasi-judicial power (that is, power to conduct administrative hearings). The legal status and powers of boards of education vary in the several states and even for counties and districts within a state, but for the most part boards of education are from time to time confronted with the necessity of holding a hearing on the professional rights and status of a teacher. Under the most liberal provisions for judicial action by the board, neither civil nor criminal action which would normally fall to the courts can be included as a proper function of the board of education. The board is charged with the responsibility of maintaining an efficient school system, and the heart of that efficiency is the professional work of the teacher.

Fairness the Basic Principle

A teacher may be professionally incompetent and not in any way be subject to civil or criminal action within a court. It is this type of case which after due study, care and consideration, should come before a board for a hearing. In cases where court action is taken the decision of the court may provide justification for board action without an actual hearing. The basic principle however is

the necessity of insuring the accused of a *fair* hearing.

The immediate cause for precipitating action which requires a hearing before a board of education may be only one of a number of causes for taking final action. The causes are usually accumulative with the one which finally brings action, surrounded by an aura of high-pitched emotions which may dim if not actually prevent clear thinking and judicious action. Parents may be overwrought and hysteria sweeps through the school and community to such a degree that the way to wise judgments and fair decisions is difficult to chart and even more difficult to follow. What, then, are some of the critical issues to be faced by any board in the contemplation of any hearing? Certainly in the light of the report under review, among them will be a carefully prepared notice to the accused, setting forth contemplated action and stating specific changes upon which the action of the school board is based. The notice should be given in sufficient time for the teacher to consider the charges and prepare a defense if he so desires. This is essential to a *fair* hearing, and a board that is negligent in these matters is inviting trouble and possibly later censure from the courts. The cornerstone of an acceptable hearing is fair play.

According to the report "all tenure laws and many continuing contract laws specifically require a hearing or imply a hearing by provision that the accused have an opportunity to defend himself." It is pointed out that a number of state laws lack clarity and are not as explicit as might be desired, but the intent in most cases involving tenure rights is that the teacher is entitled to an adequate and fair hearing. In instances where hearings are contemplated, boards will do well to verify the school laws under which they operate in the determination of rights to a hearing. Statutes vary but "many teacher laws provide that a hearing shall be held if requested by the accused." This should be clear to the accused and the board, and each party should be clear as to specific rights and responsibilities. The board should not fall into the error of delegating the responsibility to a committee unless provision for such delegation is specifically provided for in the statutes. Where such provisions exist the steps of procedure should be carefully noted and followed in such a way as to insure the intent of the law.

The Requirements Summarized

The report under review treats of such topics as: time to prepare defense; the right to counsel; subpoena of witnesses; role of witnesses; testimony under oath; evidence; stenographic transcript of the hearing; and voting requirements. Tabulations are given of "essentials of a fair hearing prescribed in teacher tenure laws" for a number of states and the specific items are illuminating to the whole problem. Possibly one of the most telling summaries which has been included is that by Brooks:³

¹Professor of Education, Cornell University, Ithaca, N. Y.

²"Essentials of a Proper Schoolboard Hearing," National Education Association, 1201 Sixteenth Street, N.W., Washington 6, D. C., 23 pp., price, 25 cents.

³Brooks, Collins E., "Administrative Law-Requirements of 'Full Hearing,'" *Michigan Law Review* 37:597 (1938).

In summary, it is believed that the essential requirements of full hearing should include the following: First, the consideration of the evidence by the deciding tribunal in one of three ways: either taking the testimony itself where the amount is small and time not too pressing; or, reading of the entire transcript of the testimony where such procedure is feasible; or, either of the first two being impracticable, allowing the trial examiner, or the assistant who takes the testimony, to prepare an abstract of the salient points of evidence for the consideration of the tribunal, subject, however, to the right of either party to file and argue exceptions thereto before the deciding tribunal. Second, the right to a full hearing should include a right to argue, orally or by brief, before the deciding tribunal, subject to such limitations of time and space as the tribunal may require, consistently with ample opportunity to each party to present adequately its case. And third, full hearing should, and parenthetically it may now be said that it clearly does, include the right to know both evidence and argument used against one, with a fair opportunity to rebut that evidence and argument before the tribunal makes its final decision.

According to the report "approximately 30 cases a year reached the courts of highest appeal on the question of tenure and contract rights of public-school teachers. Undoubtedly a great many more cases are appealed from school-board decisions to the lower courts. These court cases indicate that judicial review of school-board decisions is not only possible, but frequently necessary to obtain justice for the accused teacher. The extent of judicial review of school-board decisions is not under discussion in this report. Briefly it may be mentioned, however, that courts usually review only the procedure of the school board, leaving the decision of the merits of the case with school officials who are better qualified to pass upon professional

issues. The procedure of the school board is therefore very important; the letter of the law should be followed exactly, and the spirit of the law attained so far as possible. Even if the teacher-tenure law states that the decision of the school board shall be final, appeal to the courts is possible if the school board has not followed the prescribed procedure or has abused its discretion."

A Suggested Mode

Attention is called to the fact that a model law is often undesirable since it may conflict with other state legislation, but in a final summary paragraph the committee attempts to include the essentials of a fair hearing in the following statement:

At such hearing, either party may appear with or without counsel, may present evidence relevant and material to the charges, including the testimony of witness under oath or affirmation, and may personally or by counsel examine and cross-examine all witnesses. In the event any prospective witness refuse or fail to appear, his presence may be compelled by subpoena issued by the clerk of the board (or clerk of the court) upon request of either party. A stenographic record shall be taken of the proceedings and shall be made available to both parties. After all the evidence has been introduced, each party may argue the facts and the law in the case, either orally or by briefs. Decision of the board must be based upon the evidence supporting the specific charge or charges, and upon no other evidence.

Finally we commend the examination and use of this bulletin — limited in scope though it may be. It is clear in purpose, fair in treatment of issues, and worthy factual materials have been reviewed and wisely used. It is a contribution to the proper functioning of the lay board of education and a protection to the professionally competent teacher.

mon with the sixth grade than it has with the eighth and ninth grades in the junior high school. The eighth-grade pupils in most schools include in their program vocational subjects such as home economics and manual training, which makes it advisable to transfer them to the high school where the equipment for these subjects is available.

3. There is a tendency to departmentalize the junior-high-school work to a greater degree than is best for the seventh-grade students.

4. The ninth and tenth grades really belong together. These grades cover basic subjects that can be taught to advantage in the same unit of school organization. Many of the elective high-school subjects are being postponed until the eleventh year which makes the transfer of pupils from one school unit to another more natural at the end of the tenth year than it is at the end of the ninth.

5. Secondary schools offering the Smith-Hughes courses which begin in the ninth grade feel that the ninth-grade pupils should be housed in the same building with the upper grades. Such a plan eliminates the duplication of equipment which is necessary when the junior and senior high schools are some distance apart.

Schools too small to extend the high-school program beyond the twelfth year are considering the 7-5 plan of organization. Larger school systems with junior colleges favor the 6-4-4 plan.

It is evident from the reactions in the state thus far that no one pattern of school unit organization will meet the needs of all districts, and that Washington will be for some time an interesting laboratory for experimentation.

SCHOOL CHILDREN HAVE BEEN KILLED Maurice G. Osborne¹

Since July 1, 1945, two New York State school children have been killed by motorists passing school buses which were discharging pupils near their homes after school. In one instance, it was the first day that the little girl had ever attended school. Upon being discharged from the school bus, she was anxious to return to her mother to tell her all the happenings of her first day at school. She was also probably anxious to just return to her mother, as soon as possible, because she had always been with her during her five years of life.

This is a pathetic happening, even in this postwar time, death and maiming for life. This was a life that could have been spared. A motorist drove by a standing school bus at a speed which prevented instant stopping of the car, and consequently a child was instantly killed.

The driver of this car was a resident of New York State and should have known its laws. The Motor Vehicle and Traffic Law (Art. 6, Sec. 61, par. 24) states, *Stop — Proceed With Caution*. This requires a dead stop upon approaching a standing school bus from either direction and then cautious driving at a slow speed until the motorist is entirely free of the bus. Such caution

(Concluded on page 96)

What Grades Should Constitute the Junior High School?

Thomas R. Cole¹

The state-wide school-building program in Washington, which is directed largely by the state department of education, has stimulated much discussion as to the grades that should constitute the various units of school organization.

The question is — Shall we retain the traditional 8-4 plan, the 6-3-3 plan, or should other divisions of grades in school units be considered? The law recently enacted in Washington, which authorizes the extension of the secondary school program to include the thirteenth and possibly the fourteenth years, has added to the problem.

The junior high school is the unit of greatest discussion. There is a feeling among many administrators that the seventh, eighth, and

ninth years do not constitute the proper grades for the junior high school. Some of those taking this view argue that the elementary school should consist of grades 1-7; junior high school, grades 8-10; and the senior high school, grades 11-12, plus the extension of vocational subjects in the thirteenth year.

The arguments presented in favor of this plan are:

1. The seventh-grade pupils are better adapted by age to the elementary school than they are to the secondary school. Parents often object to sending the seventh-grade pupils to the junior high school, especially so when it is in the same building with the senior high school.

2. The program of subjects commonly offered in the seventh grade has more in com-

¹Professor of school administration, University of Washington, Seattle 5, Wash.

¹Chief, Bureau of Field Service, New York State Education Department, Albany, N. Y.



Kornhausbrücke School, Zürich, Switzerland.—Architect, A. H. Steiner, Municipal Commissioner of Buildings, Zürich.

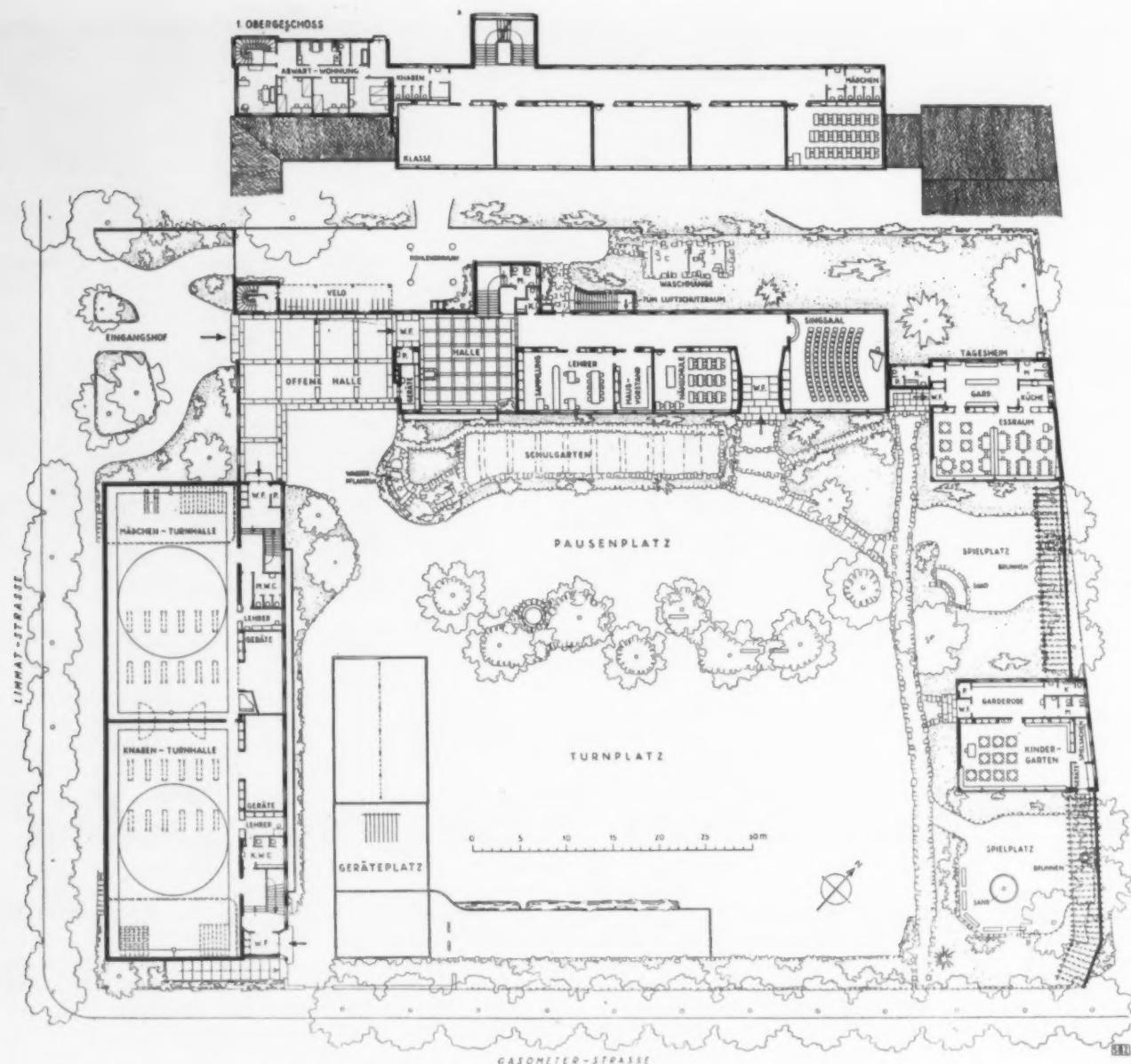
A Model Swiss Elementary School

The Kornhausbrücke School erected in 1944 from plans of Architect A. H. Steiner, represents in design, plan, and equipment the high standards of completeness and functional utility of the newest Swiss schoolhouses. Above, the general view of the building from the south shows in the foreground the gymnasium; at the center the

three-story classroom unit; at the right center the day nursery; at the right the kindergarten.

Below, the view from the east shows the gymnasium at the right; in the center the classrooms; in the right foreground the kindergarten playground.





At top of page, the second floor plan of the classroom building with custodian's apartment at left. Immediately above, the ground floor plan and site plan; at left girls (Mädchen) and boys' (Knaben) gymnasium; in upper central building, the open and enclosed entrance halls; teachers' (Lehrer) room; sewing (Nähgeschule) room; music room (Singsaal); at right, day nursery (Tagesheim); at lower right, kindergarten.

The sewing room, like all classrooms, faces southeast. It is finished with plastered walls, ceilings bordered with acoustical material, linoleum floors.

The main door which is reached through a shaded entrance court leads to an open hallway and a glassed-in hallway.

The building is constructed of reinforced concrete. The exterior walls are plain concrete, treated in part with brick and limestone. The windows are wood; the roof is tile; the stair treads are granite, and the corridors and entrances have kiln tile floors.



The modern ornament is limited to a colorful mosaic in the entrance hall, sgraffito figures on the gable of the gymnasium, a carved stone figure of a boy in the playground, a stucco wall ornament in the music room; tile corridor drinking fountains.

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(Lehrer)
music
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rooms,
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The music room. Pictures by courtesy of the Swiss Information Office, Mr. F. Dossenbach, director, New York, from "Schweizerische Bauzeitung" and "Werk."



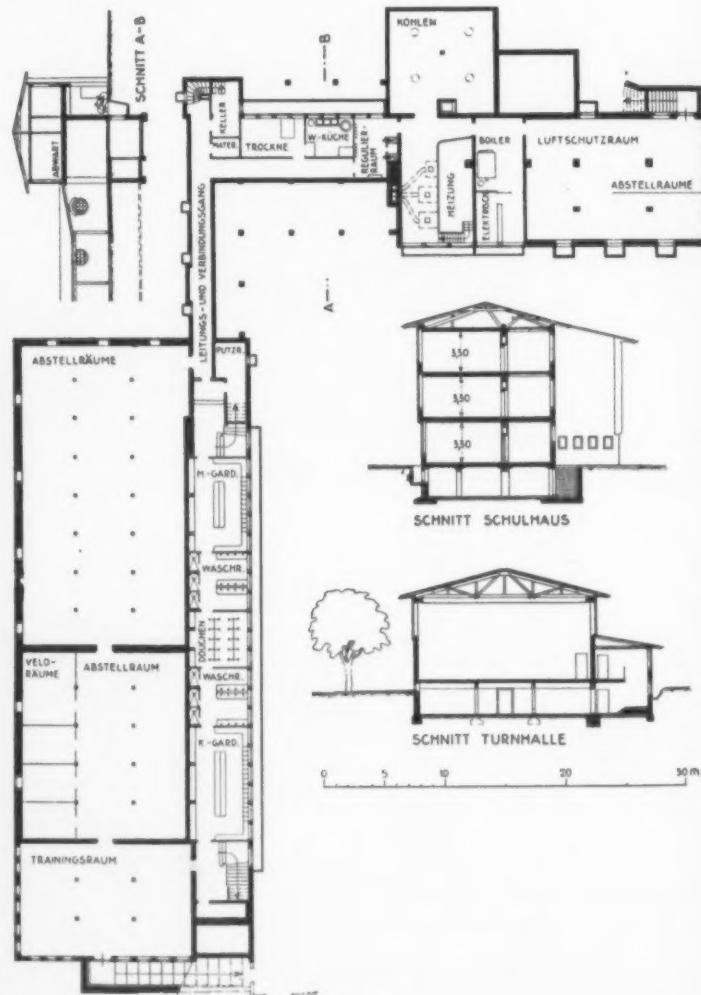


(Left) The playroom and the dining room of the day nursery are separated by a glass partition and are used for serving noon lunches to all the children. (Right) The kindergarten, like the day nursery, has adjoining it large wardrobes and toilets.

The building, which literally turns its back to the rear and side streets, is so located on the site as to give all instructional areas a southeast or east exposure and to provide in one large square a recess playground (Pausenplatz), an outdoor physical educational area (Turnplatz), and an area for play apparatus (Geräteplatz).



The main stairway has short runs, broad landings, and excellent lighting. The corridors have ample windows on one side and are fitted with simple hangers for pupils' clothing.



Basement Plan and Sections. At left, the dressing rooms and showers under the gymnasium; top right, the laundry, boiler and fuel rooms, and the ventilating room.

PLANNING THE SCHOOL GYMNASIUM

Arthur R. Winters



Corner of the Gymnasium, Fairfield High School, Fairfield, Iowa.

(Concluded from January)

V. Seating for Spectators

Bleachers and bleacher space must be considered when planning the size of the floor. In the light of the probable uses to be made of the gymnasium, it behooves the planners to carefully estimate the bleacher needs in terms of spectator capacity. The bleacher problem, as herein discussed, will deal only with the true gymnasium unit and not with combinations. The size of the crowds that will attend the basketball games will provide the key to bleacher needs. The maximum turnout, rather than the average or minimum, should be the guide; and the maximum attendance will come with the successful season when community interest mounts. It is far easier to handle a crowd below capacity proportions than it is to try to expand immovable walls when facilities are inadequate. Where good bleacher seats are available, satisfied spectators will be found. Bleacher requirements are not wholly measured by basketball games for there will be occasions when more floor area and less bleacher space is needed. Such occasions might be school or community dances, intramural contests, Red Cross fetes, "county fair" nights, or graduation exercises. This points to the need for flexibility in the type of bleacher installed. Whatever may be the demands, bleachers must be considered a requisite part of the gymnasium and not just something added. Designs for bleacher installation must also take into account their relationship to the type of wainscoting, the location of drinking fountains, the height of the windows, the arrangement of basketball backboard supports, the size of the court, radiators, and doors.

It is common practice to classify bleacher arrangements under four types: (1) built-in or permanent, (2) folding, (3) temporary or portable, and (4) combinations of these three. The built-in type provides a permanent arrangement and its utility value diminishes with its inflexibility. Selection of this type presupposes that the question of space is of little concern and that costs are inconsequential. A major objection to the erection of this type is that it uses a lot of space which might well be used for activity. The proponents of this type contend that the space underneath the bleachers can be utilized for other than activity purposes. This claim applies to storage and, where height permits, locker and shower units may be installed. Another objection is the creation of a hazard where the built-in bleacher rises from the floor level. This is particularly true where cross courts end close to

such bleachers. In addition to the initial cost of the bleachers the amount of waste space must be written off at a rate estimated at \$5 a square foot; this places a high premium on unused areas.

Permanent Folding Bleachers

In the second group there are several styles of folding bleachers. Some are known as collapsible, others as accordion type; all based on the same principle of folding back against the wall when not in use. Their chief advantage is that they permit the use of usable floor area when they are not occupied. This space will approximate 75 to 80 per cent of the area required for the bleachers extended. Furthermore, the folding type, by nature of its construction, requires less space per seat than the permanent type, thus increasing the seating capacity. It should also be pointed out that some styles are constructed so as to permit partial use by pulling out a limited number of rows, which is often desirable to meet the needs of the occasion. The ease of operation gives this type a distinct advantage over the temporary or removable type. While the initial cost approximates the cost of built-in stands, the flexibility of the folding type offers a decided value in creating more usable space.

The temporary or portable type possesses the dubious value of lower initial cost. Labor costs for erection and removal, wear and tear on the floor, rate of depreciation, and need for storage space offset savings in original outlay. The time needed to put up and take down temporary bleachers often interferes with the normal progress and control of scheduled classes. Constant handling tends to reduce the life expectancy of these structures.

The combination type involves the use of more than one of the above forms. A number of schools use such an arrangement to utilize their space to the best advantage. The usual plan provides for permanent seats at a level over and above auxiliary rooms or hallways; then against the wall separating these units from the gymnasium floor and below the permanent stands the folding or removable units are placed. In this way the playing area is not greatly reduced. This arrangement appears to be more practical in schools where crowds may exceed 2000 persons. The problem of bleacher planning resolves itself primarily into a question of the kind of use to which the gymnasium will be put. Is it principally for activity programs engaged in by many students, or is it to be used chiefly as an exhibition hall?

VI. The Gymnasium Walls

Interior wall finishes in gymnasium construction reveal a variety of materials. The criteria for selecting a finish should include: (1) cost, (2) durability, (3) practicability, (4) insulating properties, (5) acoustical properties, (6) aesthetic qualities, (7) educational philosophy, and (8) flexibility or adaptability.

Cost consideration may be the dominant factor when plans for interior wall construction are made. The choice should not be dictated by initial costs so much as by long-term economic considerations. Replacement and maintenance costs cannot be overlooked in foresighted planning. The application of other criteria will directly affect the ultimate cost. Costs are definitely related to durability. Since most buildings are constructed on a basis of 50 years' minimum use, the materials used therein should be long lived. And in a gymnasium shock-resistant finishes are in order.

These materials should meet the test of practicability. Are they suited to the purposes for which they are intended? Is the finish suitable for apparatus or bleacher attachments? Does it show marks easily, and can these marks be readily removed? Is the construction shock resistant?

The interior wall finish should also possess insulating properties. The large cubage involved and the desirability to cut heat losses suggests the use of insulation but of a type suitable to the usage anticipated. While acoustical qualities often coincide with insulating values, some acoustical materials are not advised where attachments have to be made, or where balls make contact, or where spectators use the wall for a back rest. Choice of materials should be subject to a common sense approach with respect to aesthetic qualities. Whether costly or inexpensive materials are used, good taste dictates that the environment should be attractive. The use of warm attractive colors in the interior finish contributes to pleasant living.

Any interior will reflect the educational philosophy which serves as a background for building planning. A formalized activity program may dictate a different interior than will a recreational type. Some administrators and teachers favor wall and overhead apparatus while others do not. Whatever the philosophy of the moment, it should be kept in mind that the gymnasium as planned and built will likely outlast several changes in educational practice. Therefore flexibility or adaptability should guide the choice of materials. Witness how wartime physical-fitness programs have experienced difficulty in adjusting themselves to hollow, unequipped exhibition structures called gymnasiums, and one realizes the need for flexible interiors.

Wainscots and Upper Walls

Choice of materials will also be determined by whether or not the gymnasium is built unto itself or in combination with some other unit. Where auditorium programs prevail greater use of acoustical materials will occur, and more consideration will be given to decorative effects. With emphasis on physical-education activities more durable and practical finishes will be in order.

With the selected criteria in mind the choice of certain materials may be proposed. Where walls are built with wainscoting, good practice indicates the use of masonry materials capable of supporting apparatus or bleachers. Glazed brick or glazed tile in light colors predominate because of their stability, attractiveness, smoothness, and ease of cleaning. Wood or plywood panels when backed by masonry units may prove satisfactory but are more suitable for combination units. Plaster, cork, and acoustical tile, at this level, do not offer a good surface for attaching equipment nor for resisting impact. Face brick, tile brick, concrete blocks, while practical, lack smoothness and attractiveness. The trend is to extend the wainscot above the bleachers, or to the window sills, perhaps as high as 10 to 16 ft. Where foldback bleachers are installed and the wall behind them is concealed, economy may be practiced by using less expensive brick, tile, or concrete.

Above the wainscot greater use may be made of acoustical and insulating materials. Lighter weight materials become more prac-

tical at the higher level. This may mean a reduction in durability and increased costs, but the resultant values in heat savings and noise reduction will more than compensate for increase in initial costs. Such materials are commonly attached with special fittings, or bonded by an adhesive agent to the tile blocks, bricks, or concrete blocks of the supporting wall. In some instances the entire wall, from floor to ceiling, has been finished with the same material; a contrasting wainscot may be effected by painting. For better teaching and pupil response sound-control materials are advocated. Caution should be exercised in selecting a material that will not disintegrate under normal usage nor show ball marks. Some wall materials will require repainting and so add to maintenance costs. Cork blocks and thick acoustical tile blocks are recommended for sound-deadening finishes for upper walls. It should be noted that such materials are not as fire resistant as solid masonry would be. Since sound-control materials are selective of noise intensities their sound-absorbing powers should be related to the frequencies most likely to abound in the gymnasium. It should be added that cubage costs have shown a differential of as much as 4 cents a cubic foot due to variance of interior finishes.

VII. Lighting the Gymnasium

Lighting is another element of the gymnasium worthy of careful planning. Both natural and artificial sources must be considered. Natural lighting of the gymnasium floor is a phase of building construction saddled by the yoke of tradition and antiquated building codes. There must be light — sunlight — say the codes, so we legislate a minimum percentage of the floor area as the formula for window space. Roughly this varies from 20 to 25 per cent of the floor area. As is often the case, this minimum becomes the maximum in the mind and eye of the architect even though space and location permit the utilization of greater window area. On the other hand, the construction of some units would be more economical as well as practical if this regulatory minimum did not prevail as a restriction, but as a guide.

If one of the reasons for such a regulation is that natural lighting contributes to healthful living, we are likely to be misled as to the extent of this contribution to life. In the first place, the ultraviolet rays which contribute most to better health do not penetrate ordinary window glass. To be sure, a certain amount of radiant energy becomes available and is duly welcome. The case for greater window area is properly based on the principle of more light for better seeing and for facilitating faster reaction time to moving objects. Natural lighting also contributes to the cheerfulness and joy which should abound in a play area. It should be added that thoughtless utilization of natural lighting may prove a hazard; controlled natural lighting in a gymnasium is as important as well-designed lighting for a classroom.

Careful planning will avoid the construction of windows which permit glaring and undesirable wave lengths at eye level. Fast-thrown or batted balls are hard to see; reaction timing is interfered with, accidents result, and the enjoyment of the activity diminishes under poor lighting arrangements. It is advisable that windows be placed so that glare is at least minimized if obscure or frosted glass is not used. Special glass which directs the rays away from the students' eyes is also recommended. For those who would seek the benefits of usable ultraviolet rays there is now on the market a glass which permits the penetration of selected wavelengths. It is now necessary in some gymnasiums to provide curtains to screen out undesirable glare; a remedy which seriously cuts the amount of light transmitted. The installation of heavy wire screening, to protect windows from breakage, materially reduces the amount of light transmitted. The use of wireglass will provide the safety measure and at the same time permit greater transmission. Wireglass is also produced with glare-reduction properties.

Recently constructed gymnasiums reveal considerable use of glass-block windows. Whereas they were introduced primarily for their insulating value, thereby meeting a long-felt need in swimming-pool construction, they have been developed since with other

desirable properties. They not only let light in but are capable of diffusing the rays away from the eye level. These blocks are also impact resisting, a desirable characteristic in any gymnasium window. The greater initial cost of special glasses is offset by the savings in heat losses, by added safety, by improved lighting conditions, and by ease of maintenance. Some objection may arise on the score of ventilating difficulties incurred in using special glasses; however, these problems may be solved by separating the functions of daylighting and ventilating.

Artificial Lighting

After the installation of large window areas for daylighting, we are still confronted with the sobering fact that the average day can be counted upon to provide sunshine only 26 per cent of the time. When we eliminate the nonschool months from this average, as well as sunlight losses due to smoke and haze, the net available sunshine shrinks. And in the winter months the health-maintaining potency of sunlight almost entirely disappears. While a minimum of sunlight may result, windows still possess the value of letting vision out.

Artificial lighting will be needed not only for night lighting but also to supplement inadequate daylight. The planner's interest centers on the quantity and quality of artificial light that will be provided at the height needed. Insufficient artificial light not only makes playing conditions unsatisfactory to the competitors, but it also reduces spectator comfort. Various lighting studies propose amounts from 10 to 50 foot-candles for gymnasium floors. The mode will be about 15 foot-candles which should serve as the minimum measure. While seeking quantity, quality of the light should not be overlooked; controlling the glare from artificial light sources is as important as sunlight control.

The desired quality and quantity will provide the key to the strength and number of lighting units required. Since the direction at which the light is diffused is important, the location and arrangement of the lighting fixtures require expert planning. The

height and character of the ceiling are well-known factors in determining the choice of fixtures. A high, open space above the beams suggests a bell- or cone-shaped fixture to direct all the light rays toward the floor; whereas a low level ceiling with a reflective surface lends itself to indirect lighting or to recessed fixtures. In the matter of arrangement of the lighting units it is essential to take into account their relationship to the basketball backboards. Not only should the baskets be well lighted, but the fixtures should be placed so their directed beam does not meet the eyes of the player as he is focusing on the basket. Lighting for practice courts also should be carefully designed. The desirability of being able to use only a partial output at a given time to supplement inadequate daylight is obvious. If the daylight comes from only one side, supplemental lighting should be arranged parallel with that side with the expectancy that units on the side away from the windows would be used first. Shadows and dark spots should be avoided. In the hands of competent architects and electrical engineers these problems are not difficult.

It is well to check the fixtures for protection against glass breakage. Wire guards and safety glass are two safety measures used. The thoughtful planner will also consider ways and means of replacing bulbs and cleaning fixtures. This may necessitate fixtures which may be lowered, or the provision for access from overhead, or the availability of portable ladders of sufficient height.

The time may not be far distant when artificial lighting will serve a dual purpose — light for seeing and light rays for health maintenance. Recent experiments in the schools of Niagara Falls may be prophetic of the use of controlled ultraviolet as a germicidal agent. While the results should not be considered conclusive, schoolrooms using these lamps had less absence from respiratory causes than rooms not equipped with lamps.

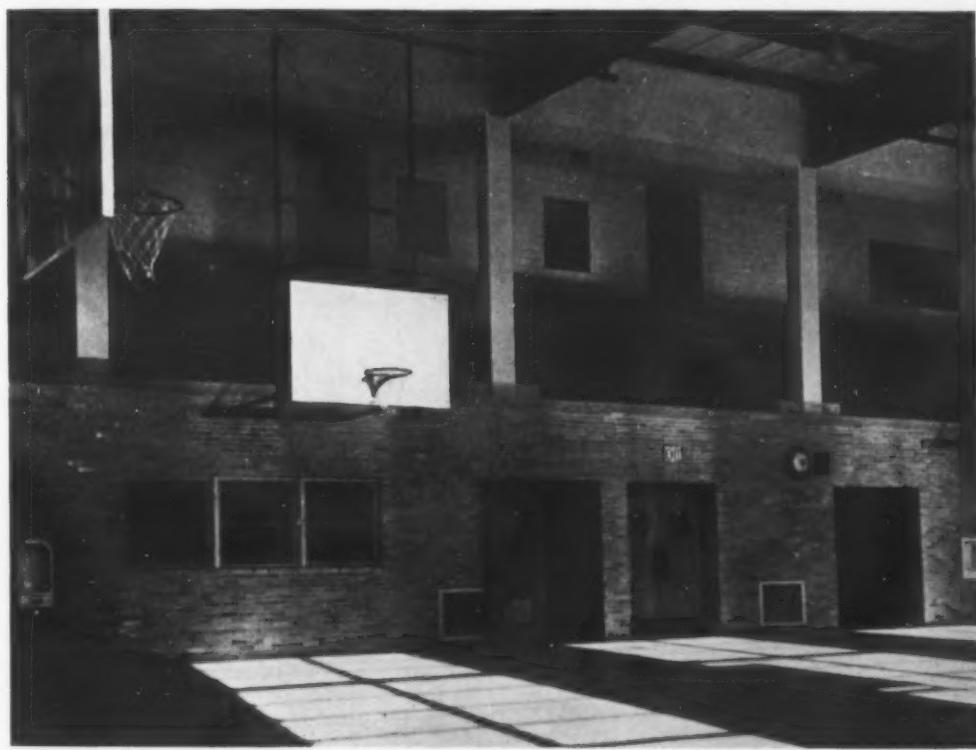
VIII. The Gymnasium Ceiling

The ceiling is that element of the gymnasium with the lowest utility value and therefore demands little attention from the layman. Its style, shape, or pitch are subject to the size, location, and form of the entire structure. It is essential there be a clearance height under the beams of 20 to 22 feet. The nature of the activity program will dictate the extent to which the beams and trusses will be used to support apparatus. In low horizontal-type ceilings insulating and acoustical materials are commonly used. Insulating materials are also indicated in high-pitched roofs or arch ceilings built with prefabricated arches.

IX

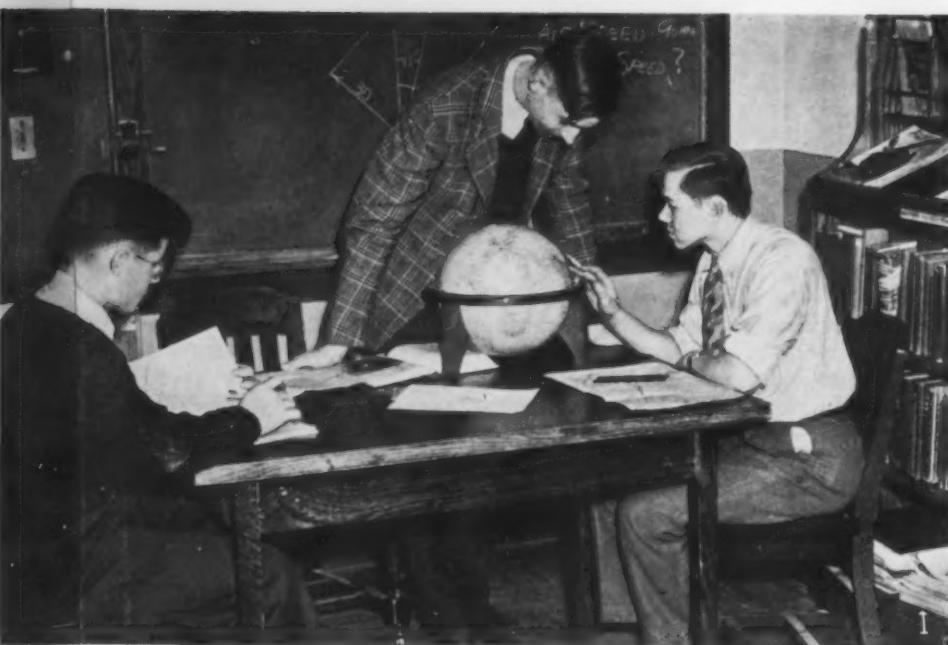
A complete discussion of materials and methods of construction might well include more specific details concerning costs. Adequate treatment of that subject demands close contact with the markets for both labor and materials. What might apply in one locality is not applicable in another, and cost estimates for 1946 cannot be accurately determined from 1945 market levels.

Board members and administrators without a background of construction experience should not be expected to closely differentiate costs. They should, however, be interested in the acquisition of information which will permit them to intelligently approach the problems of gymnasium construction with the idea of accomplishing substantial long range economies based on functional planning.



Section of the Gymnasium, University High School, Indiana University, Bloomington, Indiana, showing a fine type of permanent bleachers placed above locker and dressing rooms.

February, 1946



1



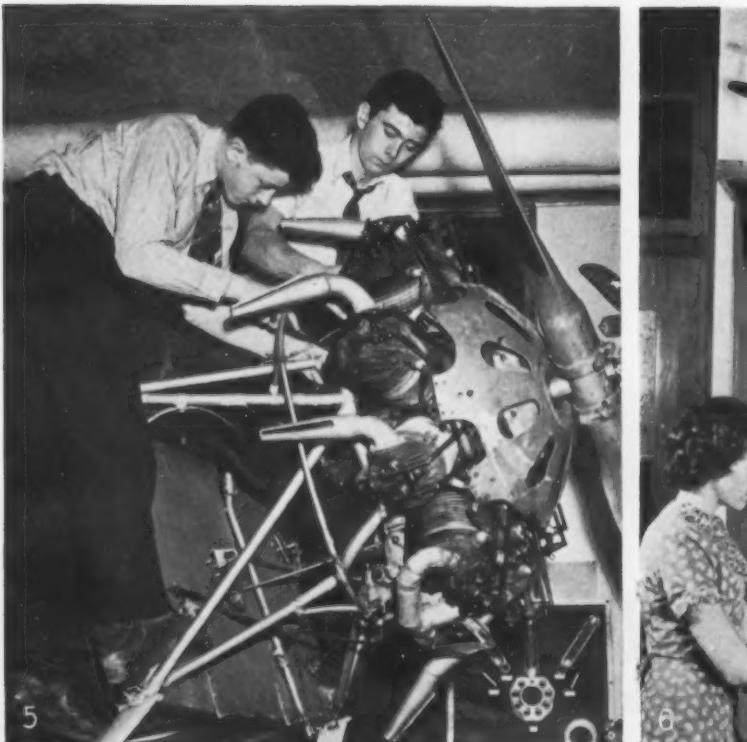
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Junior aviation has become an important means of introducing boys and girls in New York high schools into the theory and practice of aviation. Industrial arts courses include flying model aircraft, ground trainer and glider construction, maintenance and repair of aircraft, and actual flight training. Aviation theory, mathematics, meteorology, radio communication, the history and social aspects of aviation are taught as related subjects. The accompanying illustrations, reproduced through the courtesy of Mr. Roy G. Fales, Supervisor of Industrial Arts, New York State Education Department, represent typical activities schools v
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in New York State Schools



ans of schools which include junior aviation in their industrial arts and vocational departments.

(1) Studying the geography of aviation and navigation principles; (2) readying a glider for take-off of a student flight; (3) a student glider in flight over a school field; (4 and 7) receiving and sending messages in aviation communications course; (5) trouble shooting and motor tuning; (6) recording barometric pressure in meteorological course; (8) overhauling landing gear, painting propeller, cleaning fuselage, and mounting tail.



States Revise School-Bus Standards

Crawford Greene*

At a National Conference on School Bus Standards held at Jackson's Mill, W. Va., October 29–November 3, attended by representatives from 43 states and Puerto Rico, standards for school buses in effect since 1939 were revised effective with 1947 models. Meeting a growing demand from many parts of the nation, the conference also adopted standards for a small bus with a capacity of 12 to 18 passengers.

The second of its type, the conference was held under the sponsorship of the National Commission on Safety Education of the National Education Association and of the National Council of Chief State School Officers. The Automotive Safety Foundation of Washington, D. C., assisted in making the meeting possible.

Directing the affairs of the conference was Dr. Robert W. Eaves, secretary of the National Commission on Safety Education. Dr. Frank W. Cyr of Teachers College, Columbia University, served as chairman, a position which he held at the 1939 meeting held in New York City. Assisting in the direction of the conference were State Superintendent W. W. Trent, of West Virginia, chairman of the School Transportation Committee of the National Council of Chief State School Officers, and Fred W. Eberle, of the West Virginia Institute of Technology and a member of the commission.

Domiciled in the beautiful state 4-H camp, nestled in the hills of West Virginia, at Jackson's Mill, the conference devoted five full day and three night sessions to its deliberations.

In attendance were approximately one hundred persons representing the various state departments of education, manufacturers of school bus chassis, bodies and accessory equipment, and various co-operating organizations interested in the development of safer and more effective pupil transportation, such as the National Safety Council, Automotive Safety Foundation, American Automotive Association, International Association of Chiefs of Police, and the Public Roads Administration.

Significance of the Conference

The significance of the conference may be understood when it is realized that during the school session the nation daily transports over 4,500,000 pupils to more than 36,000 schools at an annual operating cost of approximately \$93,000,000. Approximately three fourths of the children transported to school ride in some 92,500 school buses. Some of the vehicles are used interchangeably to transport children to school, cattle to market, farm produce, cord wood, and numerous other products. The type of school buses range from "chicken coop" affairs on the back end of a rattling truck to comfortable all-steel coaches comparable to public carrier facilities. Much of the service is still rendered by contract.

An effective impetus to the formulation of

*Formerly Assistant Commissioner of Education, Arkansas State Department of Education.

school-bus standards on a national scale was the nationwide study made by Dr. M. C. S. Noble under the direction of Dr. Cyr in 1938 and 1939. The study, made possible by the General Education Board, revealed diverse practices in the states in regard to types of buses in use, standards for their construction and equipment. This diversity often resulted in confusion, inefficiency, and high transportation costs. The survey revealed clearly that one of transportation's most serious needs was a degree of uniformity in types and construction of school buses.

Following the study by Dr. Noble, the first national conference was held at Teachers College in 1939 at which representatives of the 48 state departments of education, engineers, representatives of body and chassis manufacturers, and other interested lay and educational leaders spent a full week in studying the school bus, its construction and equipment.

Although substantial progress was made as a result of the 1939 conference, undesirable diversity continued to exist and many thousands of children are still carried in inadequate and unsafe vehicles. Furthermore, conditions brought about by the industry in technical development indicated a need for further consideration of another conference for the purpose of revising and extending the old standards. The growing demand for centralization of rural pupils from scattered areas for an effective school program attaches an increasing importance to the school bus as a vital part of the school program. Consequently, school buses must be made safer, comfortable, and economical.

Under the direction of the sponsoring organizations and the leadership of Dr. Cyr, the meeting was scheduled for the earliest possible postwar date. Of notable assistance in the preparation for and direction of the work of the conference was the preparation of a 300-page workbook by H. D. Nelson, of Heflin, Ala., a graduate student of Teachers College, Columbia University. In the workbook, Dr. Nelson presented an analysis of each specification giving the national standard adopted in 1939, a statement of practice in each of the 48 states showing the variations in state standards where such exist, with suggestions for standards to be considered by the conference. In addition to a consideration of existing standards the workbook presented statements on "Issues of School Transportation," "Suggestions for Standards for the Small Vehicle" for which standards were not adopted in 1939, and a discussion on "Special Problems" growing out of the pupil-transportation program.

Guiding Principles for the Conference

On the first day of the conference, guiding principles were established as a basis for the deliberations of the group as follows:

1. Existing national standards are considered in full force and effect and changed only where evidence indicates that change is needed.
2. State regulations governing school bus construction should insure safe and economical

vehicles in which children can be transported in safety and comfort.

a) Safety means the safe conduct of pupils to and from school under normal conditions, and in cases of emergency. It includes the time the pupil is on the bus, and the time consumed in entering or leaving the bus. It refers to both major and minor accidents and the prevention of accidents. It also refers to the health of the pupils as affected by bus construction.

b) Economy means the construction, procurement, operation, and maintenance of school buses at the lowest possible cost of pupil transportation consistent with safety. Schools, since they serve and are responsible to the whole public, cannot foster luxurious transportation; neither can they afford to take an undue proportion of the educational budget for an activity which in itself is not primarily educational but merely a means of making education available. Uniform state standards, therefore, should discourage but not forbid luxury.

3. Uniform state regulations should: (a) eliminate the construction of unsafe buses, and (b) eliminate conflicting standards between states where such conflicts increase the costs of production.

4. Uniform state regulations should: (a) provide minimum standards, and (b) specify exact spacial dimensions in so far as this will further efficient volume production.

5. Adaptations to the minimum uniform standards may be made by the states in so far as this will permit desirable adaptation to local needs; provided, these adaptations: (a) do not conflict with uniform standards, or (b) otherwise unduly increase the cost of production.

6. The primary function of uniform state regulations is to specify the *result desired* in terms of safety and economy. The results desired must be defined when this is necessary to make enforceable regulations.

7. Uniform state regulations should be subject to periodic review and to revision when necessary through co-operation of the states.

8. Uniform state standards should permit the widest possible opportunity for the use of new inventions and improvements which will insure greater efficiency and should be consistent with the formulation of enforceable regulations.

9. Uniform state standards should usually provide limits within which sound construction is possible, thus permitting that degree of flexibility which is necessary to accommodate the various manufacturers. The actual designing of buses is a responsibility of the manufacturers.

New Specifications for Regular Size Vehicle

The conference discussed rather thoroughly the specifications for every important part of the regular size school bus chassis and body and the necessary accessory equipment. Committees were appointed to consider the standards for specific items in order to expedite the work of the conference. No attempt was made to go into those aspects of pupil transportation which are primarily administrative in nature except in cases where such practices were definitely related to school-bus standards.

Considerable attention was focused upon the number of bus sizes. Despite an effort to the contrary the number of approved sizes of the regular bus was increased. It was pointed out that bodies are made in sections which may be inserted, thus making the increase in cost proportional to the cost of the



material in the section and the labor and overhead involved. There was no evidence that fewer body sizes would result in economy. Measuring body lengths from the cowl to the rear end of the floor, with 39-in. seats on 25-in. center and a 12-in. aisle, the following body lengths were approved as minimum;

<i>Basic Pupil Load</i>	<i>Range of Body Lengths*</i>
30.....	15 ft.
36.....	17 ft.
42.....	19 ft.
48.....	21 ft.
54.....	23 ft. 6 in.
60.....	26 ft.
66.....	28 ft.

Sixty and 66 basic pupil-load buses can be used on broad all-weather highways which are relatively straight, and level and free from special hazards that might tend to prevent the safe operation of such vehicles.

Standards adopted provide that construction of bodies shall be of all-steel construction or construction of other metal with at least a strength equivalent to all-steel construction. The body shall be of sufficient strength to support the entire weight of a fully loaded bus on its top or side when overturned.

In the specifications on "identification," the conference provided that the word *Stop* should not be permitted on the front or rear of the bus, it being contended that the use of the word was confusing.

Provision was made for the equipment of each bus with a semaphore stop-arm signal with the word *Stop* printed on same in 6-in. letters, which shall contain red reflector elements for use at night. The stop-arm signal is to be used in discharging pupils who cross the street or highway. In such conditions, the driver shall pull the bus well over to the right of the road. The warning stop light will signify his intention to stop. The driver will then extend the stop arm. Traffic in both directions must stop and remain stopped as long as the arm is extended. The safety patrol will accompany the pupils to the front of the bus and on the driver's signal the pupils shall cross the road. When all is clear the

driver then retracts the arm and traffic may proceed with due caution.

Additional strength to the body was provided by the requirement that two rub rails of ample strength to resist impact and to prevent body crushing shall be applied the full length on each side of the body, one to be located approximately at the seat line and the other approximately at the floor line. Pressed-in rub rails will not satisfy this requirement.

In the specification on ventilators provision was made that no intake ventilators in the front bus corner below the top of the engine head be used. Static type exhaust roof ventilators shall be installed in the low-pressure area of the front roof panel.

The split type of window was recognized in the adoption of a provision that "all full side windows shall provide an unobstructed emergency opening, at least 9 in. high by 22 in. wide, obtained by either lowering the window or by knock-out type split sash window." A guard or thickness of safety glass which will definitely restrain pupils from extending their arms and heads out of the windows and at the same time permit the operation of the emergency opening required shall be provided.

The use of the heaters is optional according to climatic conditions. Heaters which are in constant use during the winter season shall be of the fresh-air type. Hot-water heaters used only occasionally may be of the circulating type.

Selected Chassis Specifications

No attempt is being made in this article to summarize all changes in standards or to indicate all specifications. Copies of the new standards will be available from the National Committee on Safety Education.

Among the standards adopted pertaining to the school bus chassis were:

That the battery shall be mounted outside the body shell, preferably under the hood in an adequate carrier and readily accessible.

That frame extensions shall be of a type designed and furnished by the chassis manufacturer with his guarantee, and installation shall be made only by the chassis or body manufacturer and under their guarantee.

That there shall be no welding to the frame side rails except by the chassis or body manufacturer.

That gasoline tank shall have a minimum capacity of 30 gal. and shall be mounted on the chassis frame entirely outside the body and to the right side. The exact location is indicated in the specifications.

That governors are permissible if approved by the chassis manufacturer.

That the over-all length of the bus shall not exceed 35 1/4 ft.

That tire and rim sizes based upon the recommendation of the Tire and Rim Association shall be required.

That the weight distribution shall be such that not more than 78 per cent of the gross vehicle weight shall be on the rear tires on a level surface.

The Small Vehicle

Considerable discussion centered about the possibilities of establishing standards for a 20-passenger bus with a 12-ft. body on a chassis of approximately 134-in. wheel base or for a 20-passenger bus with a 14-ft. body on a chassis of approximately 147-in. wheel base. After the discussion revealed the lack of any definite guarantee of purchases in sufficient quantity to justify production, no attempt was made to establish standards for such a vehicle.

In answer to a demand for standards for a vehicle to transport 18 or fewer pupils, the conference provided that regular commercial panel delivery trucks or suburban carryalls may be used when specified modifications have been made in such vehicles. The provisions tend to rule out the wood station wagon as an adequate and safe vehicle for pupil transportation.

For the most part the conversion plan was based upon the specifications established for the regular size bus.

Such vehicles shall be of steel-panel construction of sufficient strength to support the entire weight of a fully loaded bus on its top or side when overturned. The minimum inside body height shall be not less than 50 in. and the inside width at the seat line shall be not less than 51 in.

All seats shall be securely fastened to the body with no jump or portable seat being used. Forward facing seats shall not be less than 24 in. apart and only two longitudinal seats shall be installed.

The gross weight of the vehicle when fully loaded shall not exceed the maximum GVW rating as established by the manufacturers. The vehicle must be so geared and powered as to be capable of surmounting a 3 per cent grade at 20 miles per hour with full load on continuous pull.

Provision is to be made for an emergency door with a fastening device for opening both from the inside and outside of body. The vertical split-type door is permitted.

This type bus shall also be equipped with a semaphore stop-arm signal and shall be painted national school bus chrome with exception of the front fenders and the running board.

Specifications for four-wheel and emergency brakes are provided. The gasoline tank must be mounted, filled, and vented outside the body.

Each bus shall have at least one window with not less than 250 sq. in. of glass placed (Concluded on page 94)

*With tolerance of plus or minus 8 in.

Promotion Policy for School District 102, La Grange, Illinois

Elizabeth Zimmermann¹ and J. E. Pease²

The most important task facing teachers and administrators is that of helping each child proceed through school at the rate which will be best for him. Educators are being made more aware of the varying developmental and growth patterns of individual children, as a result of the work of child-study groups and research projects. Consequently, they are facing school promotion with a different approach from that which was formerly prevalent in the schools of the country.

"Passing" and "failing" are no longer the results of meeting, or not meeting, a set of arbitrary scholastic standards. In fact, "passing" and "failing" are gradually being dropped from the vocabulary and the practice of educators. Schools are endeavoring to plan programs of education which will meet the growth needs of the majority of children, rather than trying to fit the children to the curriculum.

There are, however, some children in every school whose rate of learning and of growth may make it wise for them to proceed more slowly than others through the elementary school. For some children this may be true at one particular stage of development, and may mean successful progress in the succeeding years of their school lives. Such children cannot be picked out by any one method. The factors to be considered are numerous and often difficult to evaluate. Teachers working with children day after day have a good chance to observe individual differences, but they may need help in focusing their attention on the significant factors in child development.

The teachers in School District 102, La Grange, Illinois, recently felt the need of a guide to aid them in deciding which children might profit from a slowing down of their educational program. In other words, how was a teacher to determine whether it would be wise for Johnny to remain in third grade another year? What about the child who was promoted to fifth grade, but who seemed totally unadjustable to the fifth-grade situation by December of that year? Should he go back to fourth grade, or would it be possible to help him to a better adjustment if he remained in his present grade placement? Who should make the decisions?

An announcement was made that interested teachers might serve on a committee with the guidance counselor in trying to set up a guide for teachers in considering such cases. Five teachers and two principals expressed particular interest and a desire to work on the problem, and they constituted the committee which prepared a "promotion policy" for the four elementary schools of the district. In

its first draft the statement of policy was presented to the entire teaching staff. Suggestions from teachers were incorporated into the statement, and it was then approved by the board of education, as it is presented here.

Promotion Policy

I. It should be kept in mind always that retention or promotion is an individual matter for each child.

II. The importance of early diagnosis of individual needs cannot be overemphasized.

III. It is the teacher's responsibility to prepare a study of each special case and to notify those concerned not later than the end of the third (quarterly) grading period if it seems wise to retain the child in the grade. Retention of a child may be effected only through a conference in which all factors are considered. *No individual teacher may retain a child in a grade.* The decision must be reached co-operatively by the child's teachers and principal, after consultation with the parent. The guidance counselor, school nurse, superintendent, and others may be included in such conferences, which may be called whenever there is evidence of need.

IV. No failing grade is to be given to a child on his report card, unless the parent has been notified. Such notice to parents is to be sent before a child's grade becomes a failing one.

V. The following questions should serve as a guide in considering the advisability of retention in the case of any particular child. Each factor should be considered in relation to all the others, and the final decision should be based on what seems best for each child.

A. Physical Factors

1. Does the child's chronological age fall within the range of the normal age for his grade?
2. Does the child's physical maturity adapt him to his grade?
3. Are there phases in the child's health history which affect his present adjustment?
4. What is the child's general condition of health?
5. Are there specific physical conditions which affect the child's progress?

6. Does the physical condition affect the child's school attendance?

7. What is the child's *total physical adjustment* in relation to all other factors in his development?

B. Mental Growth

1. Has the child achieved as much as he is capable of achieving in his present grade?
2. Has the child shown growth in the use of study skills?
 - a) Does he begin work promptly?
 - b) Does he work consistently?
 - c) Does he use his time wisely?
 - d) Are assignments satisfactorily completed?
 - e) Does he participate in various class activities?
- f) Does he display an interest in his work?
- g) Does he show pride in achievement?

3. What is the child's *total mental adjustment* in relation to all other factors of his development?

C. Emotional Development

1. Does the child give evidence of the desired degree of emotional maturity and control for his chronological age?

- a) Does he solve his problems alone?
- b) Does he depend on others?
- c) Does he evade his responsibilities?
- d) Does he deny his problem through pouting, etc.?
- e) Does he have a desirable degree of self-confidence?

2. Is the child emotionally adjusted?

- a) Does he have a sound balance between compliance to group wishes and expression of his own personality?
- b) What is his attitude toward others?
- c) What is his reaction to criticism?

3. What is the child's *total emotional adjustment* in relation to all other factors in his development?

D. Social Development

1. Does the child compare favorably in social maturity with other members of the class?

- a) Is he normal for his age in his choice of associates?
- b) How does he fit into the group socially?
- c) Does he use desirable social techniques in all contacts with others?

2. What is the child's place in the group?

- a) Is he an active member of the group or is he an isolate?
- b) Is he a leader, a potential leader, or a follower in his own age group?

3. What is the child's *total social adjustment* in relation to all other factors of his development?

E. General Considerations

1. Will promotion or retention help the welfare of the child?
2. What effect will promotion or retention of the child have upon his group?

Row Houses and Public School Support

Donald W. Robinson, Ph.D.¹

School directors are necessarily concerned with tax revenues for school purposes, and where these revenues accrue chiefly from a property tax, they must be concerned with the home-building programs that will produce this revenue.

In one high-type residential suburban community a recent proposal to revise the zoning ordinance to permit the erection of additional row-house dwellings provoked a discussion as to whether row houses paid their way in the support of the public education. To answer the question for this community a survey

was made of school support provided by the several types of dwellings in the community.

Four sample areas were selected, each comprising about eight acres and containing no unseated lands and no commercial or industrial structures. One of these areas was seated with large single dwellings, one with smaller single dwellings, one with twin (duplex) houses, and one with row houses. Area No. 1 contained 40 single dwellings, Area No. 2 had 75 single dwellings, Area No. 3 included 150 twin houses, and Area No. 4 had 282 row houses.

Reference to the tax duplicates showed

¹Guidance Counselor, La Grange, Ill.

²Superintendent of Schools, La Grange, Ill.

Watertown, Mass.

that, although the assessed valuation of the single homes was much greater per housing unit, the total valuation of the properties in the eight-acre area (and consequently the total school tax paid) was considerably less than for twin houses or row houses.

The figures were:

<i>Area Numbers</i>	<i>Total Assessed Valuation</i>	<i>Total School Tax Paid</i>
Area No. 1 40 large singles.....	\$183,900	\$ 3,678
Area No. 2 75 small singles.....	335,100	6,702
Area No. 3 150 twin houses.....	490,000	9,800
Area No. 4 282 row houses.....	627,000	12,540

The row-house area patently contributes more revenue to the support of the public schools than do similar areas of single or twin houses, *but* it likewise sends more children to these schools. Reference to the school census indicated that area No. 1 (large single houses) sent 18 pupils to the public schools of this community, Area No. 2 (small single houses) sent 22 pupils, Area No. 3 (twin houses) sent 30, and Area No. 4 (row houses) sent 81. It follows that the row-house area, although providing the largest dollar contribution of school funds, actually provided the lowest tax return *per pupil* in the schools.

The figures were:

<i>Area Numbers</i>	<i>Total School Tax Paid</i>	<i>Number of Pupils</i>	<i>Contribution Per Pupil</i>
Area No. 1 40 large singles.....	\$ 3,678	18	\$204.33
Area No. 2 75 small singles.....	6,702	20	304.67
Area No. 3 150 twin houses.....	9,800	30	326.66
Area No. 4 282 row houses.....	12,540	81	154.81

The row houses contribute to school revenue at the rate of \$154.81 for each pupil, and since the current cost of operating the schools in this community is in the neighborhood of \$185 per pupil, the row houses are depending in part on the support from other areas. Any large increase in the number of similar row houses would probably lead to a lowering of standards of the educational offerings of this community.

This problem must be faced by communities with a changing building trend. Under a system of property-tax supported schools, low-cost housing means low-cost schools. Since low-cost housing is in many communities highly desirable if not absolutely necessary, the answer would seem to lie in the direction of finding some additional base of support for education other than the local property tax.

The conclusion that row houses do not pay their way educationally is probably true for this community, but one must be cautious about applying the conclusion to other areas without local investigation.

Postwar City Plan Must Include Modern School Facilities

Charles B. Brown¹

will have to be provided to avoid overcrowding existing educational institutions already taxed by the wartime increase in population in Union City.

A Vocational School Planned

Also recommended in the Brown and Matthews plan is the construction of a vocational school, the lack of which is now keenly felt by so many residential communities. For a considerable period of time, and particularly during the war years, but few apprentices have been indentured for the skilled trades. Many of the younger men from whose ranks this group would have been drawn have moved from school directly into the armed forces. While it is true that some few of them have been given army or navy training in a skilled trade, most of them have been given service assignments where self-preservation and the arts of the war have been the dominant subjects in their curriculum.

The workers who remained as civilians have been the older men, and no youths have been trained to take up the tools and instruments of the skilled trades. In every community, there will be some proportion of the younger people who will under regular schooling take up academic, commercial, and science courses, but there will be a still larger percentage who will want to learn those trades taught only in a vocational school.

Here the war-born trades, the new secrets of air transport, radar and electronics, plastics, building trades, product design, and production can be taught the coming generation of school pupils. From a school of this type will be graduated the future mechanics, artisans, and experts who will fill the coming need for apprentices and skilled workers of the postwar years.

In any residential community which desires to become a great and modern home center, a source of workers and labor for near-by industrial centers, the need for vocational instruction was never more obvious than at the present time. A centrally located, predominantly residential community such as Union City should be the center of such an educational program. Not only residents of the town or city itself could make use of the training offered by a modern vocational school; surrounding communities without such facilities could send their pupils to the vocational school upon payment of suitable tuition fees.

The planning of a vocational school should take into consideration, among other things, the probable growth of the city and surrounding communities over a minimum period of 10 years. By such long-range planning, an investment will be made in the future of the city and of its residents which cannot fail to pay dividends to the community in the form of a trained group of workers upon which industry may draw, and from among whom the artisans and laborers will come who will assure the future of both the individual community where they gain their schooling and of the nation as a whole.



¹President, school board, Union City, N. J.

The American
School Board Journal
 A Monthly Periodical of School Administration
 Edited by
 Wm. Geo. Bruce and Wm. C. Bruce

TEACHERS' SALARIES FOR 1946

CURRENT minutes of boards of education indicate that the problem of teachers' salaries has become intensified in numerous communities. If any of the school boards hoped for a return to so-called normalcy after the cessation of hostilities so that they might eliminate the wartime cost-of-living bonuses, they have been disillusioned by the recent strikes, price increases, and in fact by the entire tenor of public opinion. Actually, there seem to be a greater number of requests for salary increases before the school boards than at any time in the past five years.

The teaching groups have two sound arguments for the reconsideration of their salary schedules. It is true that they have made economic and patriotic sacrifices in sticking to their jobs during the war, and that the steady rise in the cost of living has made the salary schedules out of line with the income of people in endless occupations of far less social significance and requiring far less preparation. It is further true that in most communities the teaching load has been raised by one device or another.

There seems to be no likelihood at all of reductions in commodity prices or in the cost of living; even the most conservative predictions are for continued industrial activity and for high levels of employment, with consequent high wages and high prices. There is every reason, therefore, for restudying salary schedules and for reasonable adjustments to a decade of prosperity.

If school boards decide to meet their local problems by continuing a plan of bonuses, then these should be made an active, basic element in the salary scheme, with an annual review which takes into account the dependable price averages of the Bureau of Commerce and of other economic agencies. The plan is being used in such cities as St. Paul, Milwaukee, and elsewhere.

The school boards which are unwilling to introduce into their salary plans the variables of annual economic adjustment, have only one sensible course to pursue at this time: to review their existing salary schedules in the light of the total situation and to consider seriously the advisability of the uniform salary plan, with due allowances for advanced degrees in education.

There is every reason for school people to work for the stabilization of prices and living costs. Even if they cannot freeze

teachers' salaries at present levels, they can make reasonable adjustments which will compensate teachers fairly without adding to the spiral of inflation. The demand for reduced taxes which is certain to come ultimately should not be allowed to hit the schools with adverse effect on salary scales.

SCHOOL BOARD RESIGNATIONS

THE causes of resignations of school-board members range from ill health or removal from the school district due to occupational pressure or even dissatisfaction with the school conditions created by associates on the board. The last-mentioned cause is disturbing, particularly when the individual is a man of outstanding probity who has demonstrated his ability as a board member and has shown effective interest in the educational welfare of the children. Occasionally, such a resignation creates enough newspaper discussion and popular resentment to cause a reform or to dislodge self-serving politicians from the board and to produce a turnaround in school finance and in the support of a superintendent's progressive policies. As a rule, however, a resignation does not produce a permanent result, and unless it is supported by a continuing group interested in the schools, the passage of a year's time will find the evils creeping back. Petty politics is a constant weakness of democracy.

The citizen who accepts a board membership must from the first recognize the fact that he has a continuous battle to fight, if not against great evils, at least against small men and women who place their own interests before all others. He must oppose inefficiency, narrowness, prejudice, dishonesty. Pressure is exerted upon him in every guise — from the most beneficial to the most destructive. Even the professional groups in education occasionally forget themselves and put forth efforts that are illogical in argument and selfish in purpose. The serious board member must further recognize that radical reforms are rarely in order, but that solid progress in the character and the scope of school services and in the quality of teaching and supervisory personnel must come in comparative slow steps.

BETTER SCHOOL BUSINESS ADMINISTRATION

SCHOOL-BUSINESS administration has unquestionably grown in importance and efficiency during the past three decades, so that numerous chief school-business officials have "arrived" as career men whose essential place in the school system is fully recognized. But by far too many school-business managers and secretaries are failing to work upward and forward to a professional level upon which they may be recognized for the true social, educational, and economic value which their work can possess.

— These men are too clerical in their daily work, too immersed in the mere mechanics of keeping minutes and other records, of placing orders and checking supplies, of doing a million and one things at the expense of solid planning for the schools and wise management of their subordinates.

— These men have too narrow and provincial an outlook and are too fearful of local political situations. They have not realized that they will be more highly respected, less vulnerable in their positions, and more confident in all their actions if they truthfully and wisely work for the welfare of the children and of the schools, no matter where the chips fly.

— These men are lacking in fundamental education in the essential sciences of business and economics, public administration, accounting and personnel management, and of at least the fundamentals of Education.

— Their lack of broad education for their work causes these men to depend too much upon mere experience and to overlook the basic principles which must be applied in determining their relations, in developing school-business policies, and in modifying practices and precedents.

— These men are prone to insist upon their own ideas because they do not appreciate the point of view of the superintendent and of his professional supervisory staff who have at heart the educational welfare of the children and consequently of the improved social, moral, and cultural level of the community.

— These men will merit the occupational and social esteem of the superintendent, of the school board, and of the community when they improve themselves through study and self-improvement. This job is one for the state and national organizations of school-business officials to tackle.

CHILD LABOR CONTROLS

THE United States Children's Bureau has made a welcome announcement in declaring the revocation of wartime amendments to child labor regulations necessitated during the war emergency.

Child labor regulations 3, controlling the employment of 14 and 15-year-old children, has been restored to its prewar standards for all industries, and no establishment producing goods for shipment in interstate commerce will be permitted to employ these young children.

Similarly, all establishments will be required to discontinue the employment of children under 18 in hazardous and health-harming occupations, and children between the ages of 16 and 17 will not be permitted to operate power-driven woodworking machines.

Even in communities where labor shortages are continuing during the present

winter, the enforcement of the federal child labor regulations will be a strong help in a continued campaign to return all children under 18 to school. The school-work program should afford further help in overcoming the difficulties of children whose families need some small addition to their income.

REFORM OF SCHOOL BOARDS

WHENEVER the board of education in a community has incurred public disfavor, a reform in the administration of the schools invariably is demanded. The recommendations offered by an aroused citizenship may center around the elimination of one or more board members, or the dismissal of the superintendent. Or a complete change in the method of selecting the board, or the disassociation of the schools from the politics of the municipal government may be urged.

Tinkering with the setup of a board of education and the method of its election rarely cures a bad school situation. It is true that large school boards and a close tie-in of schools and municipal government possess inherent sources of trouble. Similarly, the elimination of a board member is of no avail unless it is certain that his successor will not continue the mistakes of the original incumbent; a new superintendent will hardly do better than his predecessor unless he is a constructive educator, with the force and wisdom needed to master a situation and to compel the board to accept a broader educational philosophy and more generous school services. To shift from an appointive to an elective board will avail nothing unless some group can force public opinion to put in office only men of high character and experienced ability who will support the professional executive in his plans. Even so desirable a reform as complete separation from municipal politics is only effective if the new board is of high caliber, well informed, and determined to set up high standards in the teaching and supervisory staff, to broaden the entire school services, and itself to allow no politics to interfere with merit and sound personnel policies.

In the field of school administration, radical reforms are neither expedient or desired. The building of a school system is the work of many years and many minds and does not lend itself to spectacular changes and innovations. Rather, it requires the highest quality of constructive citizenship as representative of the community, and even this cannot succeed unless the community itself demands a high standard of achievement.

Of all the functions of the school superintendent, leadership is the most difficult and the most important. No criticism of a superintendent could be more severe than to say that he is merely a "head man." The fundamental problems of school leadership are perhaps made doubly difficult by the fact that the schools are public institutions, and suffer as well as gain from the advantages and disadvantages of democracy and representative government.

In a recent discussion of leadership in private business, Mr. John S. Tomajan¹ discusses a number of aspects of leadership that have magnificent value for the superintendent. Democratic participation of a chief executive's associates in administration is in this writer's experience one of the important elements of success:

Leadership is difficult to define. While we know exactly what an operator in the shop must do, and can describe in detail the duties of a salesman, an accountant, an engineer, a stenographer — when we reach the top, we become vague. We adopt a sagacious manner and cover the requirements with a generalization to the effect that the person occupying that post must possess the "fundamental qualities of leadership."

The reasons which lead to the appointment of a chief executive in a business are not unlike those which lead to the appointment of a schoolman to the superintendency:

Just what are the qualities for which a man is appointed to a position of leadership in a business? He is there primarily because he is supposed to have good judgment. A multitude of facts are constantly at his disposal. The owners and stockholders of the business, through the directors, have delegated to him the final responsibility of weighing facts and conditions and of determining the course of action of the organization. In other words, he is placed in that position not because of his ability as an engineer, a salesman, a financial man, or a production man. Nor is he there because of his financial interest. He is in that post because of his reputation for good judgment, and he is expected to exercise it when a decision must be made.

If this concept is correct, we can describe the leadership expected of the executive head of a company as the responsibility of rendering judgments, promptly and decisively, on facts or conditions pertaining to the business so that the energies of the organization will be integrated and its usefulness increased.

Practical Ideas and Action

Some of the most important work of the chief executive in a school system derives from suggestions and direct help given by his immediate associates and by teachers. Discussing the practical suggestions in a business, Mr. Tomajan writes:

The responsibility of the head of a business is to choose a course of action. But he must have a variety of possible courses from which to choose. Instead of speaking of courses of action,

¹Harvard Business Review, Vol. XXII, No. 3 (Spring, 1945).

let us call them "ideas." From whom are ideas to come?

I have discovered in my own case that the head of a business is not a superman, the exclusive source of wisdom. Ideas will have to come from others as well as himself. To a great extent they must come from the organization. The organization must be made to understand that the leader depends upon it for the leadership he hopes to give. In other words, the organization is to lead the leader. If the problem is one of engineering, the engineering department must lead the leader. If it is one of production, the production department must lead. In the case of a marketing or selling problem, the leadership must come from the sales department. If the problem is one of finance, leadership must come from the department in charge of finances. And so it goes. The leader must be led by the organization. In return for the leadership which the organization gives him, he assumes complete personal responsibility for decisions and the determination of courses of action integrating the energies and abilities of the group.

After I had been with our company more than a year, I had an opportunity to experience this power of leadership of an organization. A sales manager was needed for one of our factories. We had not yet recovered from the dislocations of World War I. At the moment, no one was available who was qualified by experience for the position. Although I was completely inadequate from that standpoint, I was placed in charge of the sales and of the office of that plant.

I am grateful today for the fortuitous good judgment which prompted me to reach out to the organization for help and guidance. For some reason I have never been greatly impressed by prerogatives. I must have convinced the small group of people around me that my only interest was in getting the job done. They knew my limitations. I knew that I had limitations, but I did not know them in detail. The organization reached out to help me. We worked together. As time went on and I became more intelligent about the details of the work, my contribution became more adequate. I could sense the satisfaction of my organization in the part they were taking in developing their leader. It was inspiring experience.

Credit Where Credit is Due

The leader in a business must recognize his dependence upon his associates and must give them credit for what they do. The most successful superintendents of schools are the men who readily give credit to the help which they receive from their associates and who use a democratic procedure in encouraging the acceptance of the ideas of the younger men. In this connection Mr. Tomajan observes:

My experience has shown me that as soon as the leader has himself recognized his dependence upon his organization, by his manner he automatically invites and will surely receive the leadership of his associates. The first step toward the ideal condition of perfect co-operation is for him to recognize that it is not his function to be the sole fountainhead of wisdom and the source of all progress. Once he admits that he is not a superman, he places himself in

(Concluded on page 86)

Leading the School Leader

Marked Progress in Effort to Reorganize 12,000 Illinois Public School Districts

H. B. Mulford¹

The planning of school-district reorganization for the state of Illinois has taken on almost sensational proportions. Under legislation of 1945, which made permissible surveys of the operations of the public schools of any county under state auspices and expense with a view to district reorganization (see *JOURNAL* of October, 1945), state leaders had not expected more than 40 or 50 counties out of the total of 102 would undertake the task. In a previous similar survey endeavor four years ago, 17 counties started, but all did not finish.

Now that elections have been conducted in all counties, the total number to undertake this active type of participation is 93 counties. Since each county survey committee is made up of nine members elected by local school boards, plus the county superintendent ex officio as executive secretary, this means that for nearly a year and a half some 930 people will be canvassing about 11,000 out of more than 12,000 school governments of the state to ascertain in what respect they are at fault for administrative backwardness of the public schools of Illinois.

Two significant facts stand out in the preliminaries of the school surveys. One is that the Illinois method for arriving at redistricting is greatly different from the state imposed type of coercion by the legislature. All along the line the effort has been based on the theory of local democratic self-determination with approval eventually to be given at public elections in all districts affected. It is not at all unlikely that Illinois may be setting a new pattern for the solution of the vexatious problem of too many small school governments. The other fact is the high degree of interest shown by agricultural leaders. Previously the chief stumbling block to orderly reorganization was the separatist point of view and fears of the farmers that reorganization meant taking away some of their vested rights in school government.

This does not mean that all people in the state are in accord on school government. But the change in the points of view of leaders is phenomenal. For many years the principal groups of women's organizations have steadfastly advocated district consolidations in the extreme. Teachers generally held much the same view. State administrations feared to ride over the obstacles presented by farmers through their legislative representatives. Four years ago, when the general plan of self-surveys by groups elected by school boards was first introduced, these fears possibly were best expressed by the fact that 85 per cent of the counties turned down the plans. That attitude now is completely reversed.

In many quarters the causes attributed for this change have emphasized teacher shortages, with 1500 one-room schools closed out

¹Wilmette, Ill.

of a little less than 10,000 such schools, as well as numerous classes also closed, and the serious need for additional building facilities which possibly cannot be financed by many of these inadequate local districts. However, state and county officials assisting the survey committees express the belief that there is a basic change of heart among farm leaders who are beginning to understand some of the causes for inadequate education for their children. One factor pointed out is the open attitude of important farm publications in the support of at least the idea of investigating the situation.

Early activities of the 93 committees largely are concerned with finding their bearings. State Superintendent Vernon L. Nickell appointed a newly authorized state reorganization commission of nine members, which has just published a formal manual of guidance for the committees. Various conditions are analyzed and criteria set up by which county survey committees may reasonably judge wherein public-school inadequacies can be laid at the door of an excessive number of local school governments.

Meetings have been conducted in many areas over the state, at which guidance has been offered by state officials. One type of meeting is that by regional groups of county superintendents and their committees. In Illinois the 102 county superintendents, for the sake of exchange of ideas and experiences, divide their work regionally. Eight districts have 10 counties each and two have 11 each. Early in January 10 county groups which have Chicago for their hub met in that city for an all-day session. Leaders from organized farmers, the state office of public instruction, Northwestern University, and the University of Chicago discussed in the most intimate details the organizational and financial problems of good public-school administration. These discussions sharply emphasized the need for districts large enough to support the schools within them adequately and to supply competent professional administrators and good teaching staffs, the merger of small rural districts whenever possible into community-centered school systems, and the further need of integrating all 12 or 14 grades in a given area into a unit system of administration under one school board and one professional administrator.

As expressed by state officials "the survey movement has taken the state by storm." The small district people now realize that if they do not reorganize themselves, the state may force them to do so in a fashion they may not like. The people are ready to improve conditions for their children.

Some of the factors which stare the people in the face are current teacher records. It was stated that in the state teachers colleges and universities only 24 people were training for positions in the one-teacher schools. Those

training for high school represented 87.6 per cent of enrollments, and those for elementary schools 12.4 per cent. Emergency certificates were granted to more than 3700 teachers with training below state and county requirements, and the state estimated the number would reach 4000 for the 1945-46 school year.

In the surge of interest it was found that some survey committees had been so eager to get consolidation results by next September, so as to produce benefits at once, that they had already completed their tentative work. In one case a county of 109 districts planned to draw all districts within the community-centered systems of 11 communities.

A very large job lies ahead of the counties with numerous communities. The problems involve much more than merely the rural districts. Consideration is being given to the urban communities into which rural districts would be merged, to high schools which overlap several elementary districts which feed into them and to the problems of regional high schools and regional junior colleges, of which recently 97 new ones were recommended by a special commission appointed by the state governor.

One fly in the ointment is the local loss of a considerable percentage of the state appropriation planned for through the greatly increased number of counties undertaking the surveys. The most populous county, Cook, where numerous suburban villages exceed in population numerous whole counties down-state, will operate on slightly more than \$4,000 where it had expected \$7,500. About 13 counties will have a little over \$1,100, and the great majority a little more than \$800. However, it has been held out to these committees that in less than a year there will be another session of the general assembly which, if enthusiasm among educational and farm leaders continues, would in all probability grant additional funds to see to completion the radical yet orderly reorganization of its more than 12,000 districts.

Possibly the situation at the moment may best be summed up by statements of widely experienced educationists with long records for making technical surveys. They have openly expressed the thought that with school-board members, professional educators, and active citizen committees, especially including the farmers, co-operating democratically on the over-all problem, "the fact of 93 counties pursuing this work is the most favorable happening for public education in Illinois since the first school law was adopted in 1885."

NEW POSTWAR BUILDING PROGRAM IN VICTORIA, TEXAS

The board of education at Victoria, Tex., has approved a postwar building program for the public schools and the junior college. The board has purchased 17 acres adjoining the present campus, making a total of 40 acres.

The building program will comprise an administration building for the junior college, a cafeteria building, a girl's dormitory, a vocational shop, a maintenance shop, a horticultural house, and a bandroom. An experimental farm for the agricultural department is also planned. Other projects will include an elementary building for primary children, an elementary music room for an elementary school, and an enlargement of the athletic plant.

The junior college has been approved for a vocational school for veterans, to include a supervisor for each 20 to 25 veterans who will teach them on the job.

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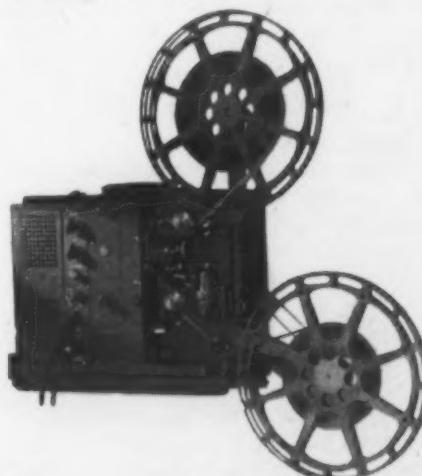
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An Administrative Need —

Legal Directives Relating to Internal School Funds

*Cyril L. Elsdon**

Among the great backlog of administrative problems today confronting persons engaged in the administration of schools is a practical problem which has remained unsolved and is of very long standing. This problem is one of having available for guidance in some definite or codified form the legal directives relating to the safeguarding of internal school funds. These funds are those nonpublic revenues normally thought of as being raised internally or within the schools and particularly those funds arising out of the receipts from student activities.

Funds arising out of the receipts from cafeteria sales, sale of textbooks, locker fees, library fees and the like, although of an internal nature, are not in the same category. The legal directives for these funds have for the most part followed those legal requirements in operation for the control of regular tax monies or public revenues as provided for by the various state school codes. This condition exists because such functions as the operation of cafeterias, the sale of textbooks, and other services have become direct charges of boards of education and consequently have been taken over by school authorities, while the financial affairs of student activities have been left largely in the hands of students.

It is common to find that the bylaws of the board of education have a great deal to say about regular funds or public and tax revenue monies, but they are usually silent about internal school funds. The rules and regulations of student councils have often not included directions for the safeguarding of these funds. The problem may have been adequately solved in a few specific school districts, but no guiding principles or directives are available to the profession of school administration.

Why the Need

In a recent nationwide study of specific phases of school finance, the data indicated that legal directives and practices vary greatly within school systems. Settlement or clarification of legal questions relating to internal or student funds has always remained under the heading of "unfinished" or "unsettled business." The attitude has been one of "let sleeping dogs lie." Particularly has this been true in the smaller and medium-sized school districts of the country. This lack of adequate legal directives may in a large sense be due to the obscure legal status of the whole extracurricular program.

As a result of this condition much confusion, even bad feeling, has resulted and more

embarrassing situations have probably arisen than will ever be heard about. School boards have often hesitated about taking the responsibility for these internal school funds. Often school-board solicitors have not cared to venture an opinion with respect to these funds because they are frequently looked upon as very much of a private affair. As a result of these attitudes, the responsibility for adhering to certain basic and commonly accepted legal principles in connection with the safe custody of these funds has fallen upon superintendents, principals, and teachers-sponsors of student activities. They have done their best, but in many cases they have had only their personal experience to serve as a guide; they have not had the benefit of professional legal advice. The responsibility assumed here has been a moral one and it has been too great. To insure peace of mind, these persons have felt a need to be informed about the legal directives relating to the proper administration of these funds.

Many Problems Involved

Particularly is the need for legal directives acute where the financial administration of internal or student funds is highly decentralized. Under this system the financial affairs of student activities are handled almost completely within each school. Each school is virtually a law unto itself. In cases where each individual activity has its own bank account and its own separate treasurer in each and every school building, legal directives have been woefully lacking. The treasurers often deposit these funds in their own personal bank accounts. One can easily see what legal complications arise when something happens to a treasurer.

Legal implications and reasoning in some cases are fairly obvious. In cases where student organizations have paid for the installation of soundproofing materials, inlaid floor covering, and the like, it is assumed that title passes to the school board since such work is in the nature of an alteration or a permanent addition to the building. Such work results in something becoming attached to and a part of the school building. This is frequently treated in the legal sense as a gift to the school by the students. However, where movable equipment such as cameras, stage equipment and furniture is involved, the same legal reasoning would not apply. The question then remains as to just who has legal title to furniture and equipment bought out of internal school funds.

Student organizations frequently accumulate surplus funds, which they invest. The question immediately arises as to whether

such surplus funds can be invested at all. If they can be invested there are problems as to who should do the investing, in what names the investments should be, and what investments would be considered legal for funds of this character. There is also the question as to whether a school board could legally appropriate these funds for the purpose of building bleachers or a field house on the athletic field, or for other public purposes.

In the event the depository should fail, there is always the legal question as to security against loss for the amount over and above the amount covered by the Federal Deposit Insurance Corporation. Other examples of legal liability would be the obligating of an individual teacher, the school, or the school district for sums of money through the signing of papers such as contracts for the printing of yearbooks, school papers, or for the purchases of school jewelry. There is ever present the legal liability for unpaid bills including federal admission taxes and any state taxes which the student organizations are required to pay. These are only a few of the questions relating to the legal aspects of these funds which have remained unanswered or not a part of the body of professional literature of school finance.

Directives vs. Legislation

Failure to adhere to a few simple practices and procedures by following out proper legal directives, based upon the broader concepts of school law, invites undue limitations and restrictions. There is already a trend in the direction of having state legislation passed for the safeguarding of these funds. Although it did not become law, there was introduced into the last session of the Pennsylvania legislature a bill "requiring accounts to be kept and a faculty treasurer appointed for school organizations handling money." There is an inherent danger here in that such legislation could easily become highly restrictive. This would be somewhat like passing laws specifying what subjects should be taught in the schools and how they should be taught.

Suggested Directives

Many of the more involved legal matters relating to the proper financial administration of internal school funds will probably remain unsettled for some time to come. The facts in each case are not likely to be the same for any two school systems. There are, however, certain suggested directives which may be offered that have evolved as more or less standard practices. They have general sanction as having met the broader instructional, financial, and legal requirements of commercial and school law for school systems over the country as a whole. They are more often recognized by school administrators as basic principles of good financial administration.

A satisfactory set of books — preferably double-entry — consisting of at least a cash receipts and disbursements book and a general ledger, should be carefully and system-

(Concluded on page 92)

*The Pittsburgh Public Schools, Pittsburgh, Pa.

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The Inter-High School Youth Council

A. J. Kettler¹

An inter-high school youth council, proposed earlier in November by Indianapolis' superintendent of schools, Virgil Stinebaugh, became a reality during American Education Week when representatives of the seven public schools met for organization in the school administration building.

The council was created as an experiment by action of the seven high-school principals to whom Mr. Stinebaugh had made his proposal. Major areas in which the council will be engaged, Mr. Stinebaugh told representatives at their "get-acquainted" meeting, are, first: maintaining and encouraging more cordial inter-high school relations; second: interpretation of informing the city's 15,000 public high-school pupils in the respective schools of the civic and community problems to which they might lend support. Through the council, pupils will develop a greater consciousness of their places in a city-wide school system, Mr. Stinebaugh added.

"The student bodies of the respective schools are commended for their school spirit and loyalty," Mr. Stinebaugh said, "but it is also important for young men and women to concern themselves with problems and interests that they can share with their fellow students throughout the city."

Executive chairman William A. Evans, director of publications, directed attention of the council members to the opportunities for

playing a role in making high-school youth felt in community affairs. "Not only should the council spearhead solution of such common problems as pupil conduct on common carriers and in other public places, but it should serve broadly in the public relations field," Mr. Evans said. The council members expressed willingness to interest their respective student bodies in participating actively in community and civic campaigns, working through bulletins and publications in their respective schools.

Membership in the council is made up of two members each from five of the schools and four from each of the other two. Equal representation of boys and girls and juniors and seniors is provided in the setup. Thus the council will be able to have the advantage of experienced members after the first year. The body plans to meet monthly. The council decided that student-faculty relationships of a local nature should be determined within the particular school, inasmuch as each of the schools has its own student council or student affairs committee.

Besides the job of encouraging stronger inter-high school relations, the group plans to acquaint itself more intimately with the machinery of governmental offices and civic and community enterprises. To attain the latter aim, council members will meet with the Indianapolis City Council, Board of Safety, Park Commissioners (to study the city's recreation system), and visit the ses-

sions of the Indiana General Assembly. Other meetings are planned with the Junior Chamber of Commerce, mayor's postwar planning committee, and civic organizations. Other contacts will be arranged with planning groups for such civic movements as Community Fund, Red Cross, and Tuberculosis Association. Special studies will be undertaken by subcommittees of the council, with final review by the council as a whole.

While the council at present is comprised of representatives of the seven public high schools, the eight parochial and private schools in the city may be invited to send delegates at a later date.

Observing School Health Policies

An expert in the field of school health recently said: "If a school is to make the greatest possible contribution to the continuing health and welfare of its pupils throughout their whole lifetime, it should formulate and apply health policies consonant with the best thought and practice in this field. Every school has health policies. Written or unwritten, consistent or inconsistent, in or out of tune and touch with the best informed professional opinion, these policies affect the present and future welfare of all school personnel, teachers as well as students."¹

The discussion here submitted is not only timely and comprehensive in that it deals with health school policies but also in that concrete plans and methods of procedure are provided. The duties assigned to health offices and their staff, teachers, physicians, dentists, nurses, and psychologists are enumerated.

The time has undoubtedly arrived when the school authorities of this country should adhere to definite policies in promoting the health of the school child. On this score the experts say: "Such policies recognize that the total health of the total child in his total life situation is the paramount objective of any school health program. Such policies evolve from increasingly accurate and certain understanding of needs of children. Such policies are free from fad and prejudice, are subservient neither to unproved speculation nor heavy-handed tradition. Such policies grow out of successful experience, are guided by expert judgment and conform with, as well as help give, direction to the policies of the community which the school has been established to serve."

Some of the lessons which have come out of the great world war would lead to the belief that the youth of the land must be physically and mentally fit to face the exigencies of life under all conditions. Health instruction and physical culture have a definite place in the nation's system of popular education.

In the light of the foregoing and in view of the building program for thousands of new school buildings in process of planning the factors of safety and sanitation is being emphasized in the following paragraph: "Every school has a responsibility for providing a healthful environment: physical, social, and emotional. The authority which requires pupils to attend school implies the responsibility to provide an environment as evocative as possible of growth, learning, and health. Location

(Concluded on page 65)



The children deserve more attention than ever during the war years.

¹Journal of School Health, October, 1945.

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To Declare Independence is Not Enough

THE MEN WHO SIGNED the immortal "Declaration" in 1776 did not suddenly arrive at the conclusions there set forth as a foreword to the free way of life. For years they had been reading and thinking about human needs and wants, and the ideals of independence proclaimed at Philadelphia were the blended product of their best mental efforts.

In their day we had no free education system, opening wide the doors to useful knowledge and moral guidance. Now, in every part of our land, even to the remotest hamlet, every American child is given an equal chance to learn; to become acquainted with the material facts on which men and women base their individual and group actions, and to cultivate habits of sound thought.

"One of the chief responsibilities of our public schools," says Burgin E. Dossett, State Commissioner of Education in Tennessee, "is to train the youth of America in independence of thinking, so that they will be able, both now and in later years, to sieve out the false from the true facts in all of their social, moral and spiritual relationships. When our boys and girls are so trained, and when they have accepted their personal responsibilities of citizenship, they will be better prepared to render service and to provide leadership in the maintenance of peace and security for America and the world."

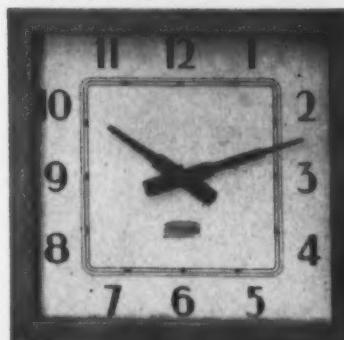
"Those courses of study which will provide the type of training and instruction to prepare the youth of America to think independently, and to assume the responsibilities of citizenship, should be included in the curriculum of every school throughout the land."

"As an auxiliary aid to classroom instruction in the building of bedrock Americanism, the value of *The Reader's Digest* is very high. It serves as an excellent guide in leading young minds to understand and appreciate the principles, the benefits, and the responsibilities of our form of democracy."

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(Concluded from page 62)

of the school should be chosen with a view to ample space for buildings and grounds; to safety from accident hazards, especially traffic hazards; to freedom from noise; to cleanliness; and to the provision of as good drainage as possible. The school should not be at the bottom of the valley nor at the top of an exceptionally high hill. There should be appropriate sunshine and shade and, if necessary, shelter from severe winds. The location should be easily accessible, particularly for small children. Attractiveness of surroundings should not be overlooked."

Thus, the health and physical welfare of the pupils and school personnel should not only be guarded in the administrative service but observed also in the planning and construction of school buildings. Literature on the subject is being amply provided thus enabling school authorities to inaugurate definite policies in the direction of health policies and clearly outlined plans of procedure. — W. G. B.

SCHOOL LUNCHES — A STATEMENT

The joint committee on health problems in education of the National Education Association and the American Medical Association, has adopted nine principles which it believes are fundamental governing the school lunch.

1. The school lunch is a fundamental factor in the general health of the school child and is a part of the health and educational programs.

2. The school lunch contributes to the child's education and constitutes a vital part of the educational experience.

3. Since many pupils live too far from school to go home for lunch, and many are the children of working parents, the school lunch assumes a place of great importance.

4. The school lunch must be planned for its

nutritional and educational significance, and not as a means of making a profit for the school or for a concessionaire.

5. The school lunch should emphasize foods of fundamental nutritional importance. Candies and soft drinks are not objectionable, unless emphasized at the expense of basic foods.

6. The sanitation of the school lunch is important because of the danger from contaminated, spoiled, or infected foods. Slovenly or insanitary handling of food is an unfavorable educational experience for those who participate in the serving or consumption of food under unsatisfactory or undesirable conditions.

7. Regardless of the source of funds, food supplies, or other contributions, the administration of the school-lunch program should be a function of the department of education, with sanitary supervision by the department of health.

8. Advantage should be taken of technical assistance from state or federal sources, if such assistance is not available locally. Continuous efforts are necessary to provide more trained persons for work in connection with school lunches.

9. A hot dish as a part of the school lunch will not contribute of itself to a child's nutrition, unless it is composed of foods which tend to make a balanced diet, when eaten in conjunction with the box or pail lunch. In certain localities and at certain times of the year, a fruit or vegetable salad is preferable to a hot dish.

SANITARY REQUIREMENTS FOR SCHOOL LUNCHES

The joint committee on school health problems of the National Education Association and the American Medical Association, at its 1945 meeting, adopted new standard sanitary requirements for school lunches.

The standards require that all persons employed in the school lunchrooms must be clean as to person and attire. They must pass a physical examination as may be authorized by the board

of education. The milk should be pasteurized or boiled on the premises. Home-canned meats and vegetables must be boiled 15 minutes after removing the can and without tasting. Leftovers must not be carried over to the next day, but must be discarded. Day-old products must not be used if there is any ingredient capable of spoiling.

The housekeeping of the lunchroom and kitchen must be up to the standard and food must be kept in closed, dustproof, and verminproof containers. Containers must be provided for garbage.

All personnel and equipment must be under the daily supervision of some person trained for such work.

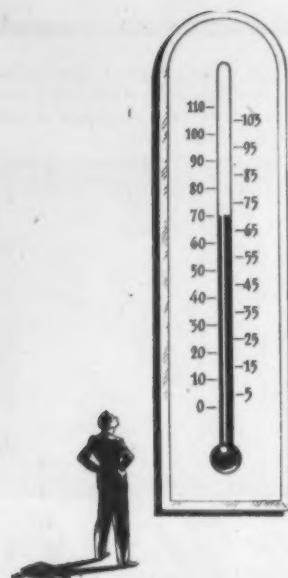
REACHING THE PARENTS

The school board of the LaMesa-Spring Valley School District, at LaMesa, Calif., has devised a so-called *Trustee's Letter*, which it is sending out regularly to the school patrons of the school district, telling them of important events in the schools. Its letter No. 4, issued in December, 1945, discussed the teaching of arithmetic and told how the problem is being met successfully in the schools of the district. Each letter is signed by the president, the clerk, and a member of the board.

MARYLAND HAS BUS SAFETY RECORD

Maryland has been free of serious school-bus accidents since a new inspection program was started a year ago, according to a report of the state department of education. Formerly, school buses were inspected infrequently, but after an accident in Towson in which 16 were injured, rigid rules were drafted which called for definite safety standards for school buses, physical examinations for drivers, and inspections of buses three times annually.

According to the state department, the inspection system has not only brought about higher standards of safety, but has also made school-bus drivers more safety conscious.



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School Administration in Action

SAFEGUARDING SCHOOL BUILDINGS IN SAN BERNARDINO, CALIFORNIA

School administrators and superintendents of buildings know that the rental of school buildings to outside organizations frequently results in damage to the property. In such cases, the taxpayers are losers in the end. The only solution of the problem is to acquaint prospective users with the necessity of footing the bill for all damages and to write into the rental agreement a clause under which the lessors agree to observe the regulations of the school board for the use of school property and to make good any damage which may occur.

In order to keep an accurate record of all organizations using the public schools in San Bernardino and to avoid damage, the business manager has recently worked out a blank form, which must be signed by lessors of school buildings and turned in to the main office after being signed by the custodian of the building used. These forms are then kept on file, both at the school concerned, and in the office of the business manager.

This procedure has not only resulted in better methods of handling the rental of school property, but has reduced theft and damage, and has made for better public relations in every way. Since each blank gives full data on the transaction, and all blanks are filed as permanent records, it is now possible to refuse use of school buildings to persons or organizations that have not been meticulous in their use of these privileges. Since the system has been worked so well in San Bernardino, it is recommended by the business office that other school systems having similar difficulties follow this same plan, by mimeographing copies of the blank form which follows:

SAN BERNARDINO CITY SCHOOLS APPLICATION FOR USE OF SCHOOL FACILITIES

Name of organization Date
Hereby makes application for the use of the following school facilities:
School Hours
Date Hours
Nature of use
Name of speaker (if any)
Estimate attendance Admission fee to be charged
A collection to be taken (Yes) (No)
The undersigned hereby agrees to be personally responsible, on behalf of the above-named organization, for any damage sustained by the school building or appurtenances thereof, accruing through the occupancy of said building by said organization, and further agrees to conform to all the rules and regulations of the San Bernardino City Board of Education governing the use of school facilities.
Signature of person applying
Address
Send permit to Address
Check with principal on availability of facilities needed?
Approved Date
Secretary of board of education Rental charge
by
Signature of custodian

CUSTODIAN'S REPORT ON USE OF BUILDING

Conduct of meeting
Approximate number in attendance
Time custodian opened building
Time custodian closed building Rooms used
Equipment used
Further remarks
Signature of custodian

IMPROVING THE LINCOLN COUNTY RURAL SCHOOLS

The county board of education of Lincoln County, W. Va., in attempting to meet an outstanding need of local education, authorized the construction of consolidated schools last year in communities where road-construction programs had paved the way. In one instance, where there were two one-room schools in adjoining districts,

each of the schools had an enrollment of 69 pupils. Temporary accommodations were provided by closing the porches and running a partition through the center to make an extra classroom.

For a number of years the board has been collecting funds for a pay-as-you-go fund for a new six-classroom school to take the place of the two one-room buildings. The rooms were crowded and the children and teachers subjected to uncomfortable surroundings.

The board has employed a special supervisory teacher with advanced training to work with the teachers in the more remote sections of the county. This teacher meets with small groups of the one-room teachers periodically, and they are given an opportunity to discuss their problems with her and to observe demonstration work by other teachers.

With the help given by two near-by colleges it is believed the schools are now going forward toward their objective of providing a better instructional program for all these isolated communities. The school budget now provides for better library facilities, more instructional equipment, and devotes more attention to the repair of school buildings and the improvement of school grounds. Thus, by and large, the school authorities have come to realize more and more that the rural child must be provided with the same educational opportunities as the urban pupil.—*Supt. Garcia D. Pauley.*

SCHOOL ADMINISTRATION NEWS

► St. Louis, Mo. The audio-visual department, in a report to the school board, has proposed an FM broadcasting station for the city schools. The broadcasting station would cost \$60,000, and radio receivers for classrooms would cost another \$40,000.

► Chehalis, Wash. The school faculty has chosen as its major curriculum project this year the development of a new language-arts course of study. A steering committee, a vertical committee, and horizontal committees have been selected and these are actively considering many problems. The committees meet regularly with the entire faculty as the need arises, in order to discuss proposed changes affecting the entire school program, and to gain the support of the staff members.

► Seymour, Tex. A cafeteria has been installed in the senior high school this year. A lunch program has been operated for some years in the elementary school. An average of 550 pupils are served daily in the two schools.

The high-school and elementary-school libraries have been enlarged this year by the addition of several hundred new volumes.

An extensive landscaping project has been started at the elementary school, with the planting of trees, shrubbery, flower beds, and grass.

An active parent-teacher association keeps the school and community conscious of needed improvements and leads in sponsoring worthwhile school activities.

► Snohomish, Wash. An interesting innovation in high school this year is the beauty-culture class. One room has been equipped with modern beauty equipment and superior lighting. Ten out-of-school apprenticed girls work eight hours per day, five and one-half days per week. The girls must put in 2000 hours of training before taking state examinations to become beauty operators. Students and school patrons who are the customers, pay about one half the charge usually required in private beauty schools. There is a waiting list of trainees who seek admittance to the school.

► New Albany, Ind. A demonstration of the new audio-visual method of education has been given in the schools with a view of inaugurating the program in the city schools.

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when delivered to the job. Weatherstripping and operating mechanism are built into aluminum windows. They need no protective painting to safeguard against rusting or rotting.

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because of the light weight of aluminum windows, and their unit construction. Erection goes fast, appreciably cutting your construction costs.



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anchor in place, and they're ready for calking and glazing. Aluminum windows work smoothly, and they're easy to keep that way.



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are neat and attractive. Their narrow metal sections make most efficient use of window openings, giving maximum glass areas. They are suited to any type of architecture.



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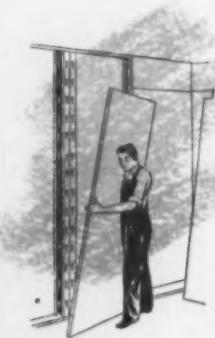
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**MOVABLE
TRANSITE WALLS**

The keystone of flexibility in Unit Construction is the J-M Transite Wall. It can be disassembled and relocated as educational needs require.

One-unit rooms, for instance, can be speedily converted into two-unit rooms, or vice versa. Made of fireproof asbestos and cement, practically indestructible materials, the movable panels are used to form rigid, double-faced partitions, 4" thick. They can also be used as the interior finish of the outside walls. The Transite base is easily removable for access to wiring, etc.



COLORFUL, RESILIENT FLOORS

J-M Asphalt Tile is the flooring element in Unit Construction. Made of asbestos and asphalt, the units will withstand the kind of hard wear and abuse that must be expected in any school building. Not only durable, J-M Asphalt Tile Floors are pleasantly comfortable and quiet underfoot, thereby reducing the disturbing effects of noisy footsteps in corridors, gymnasiums, etc. Individual units permit easy alterations or extension of patterns. Made in a wide variety of plain and marbleized colors.



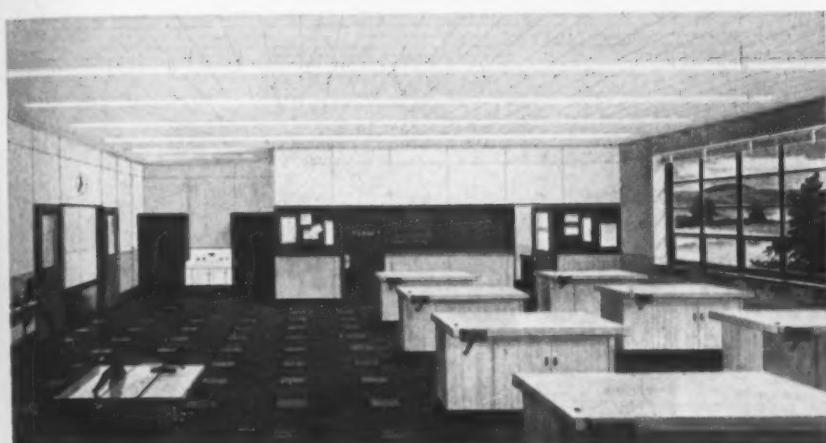
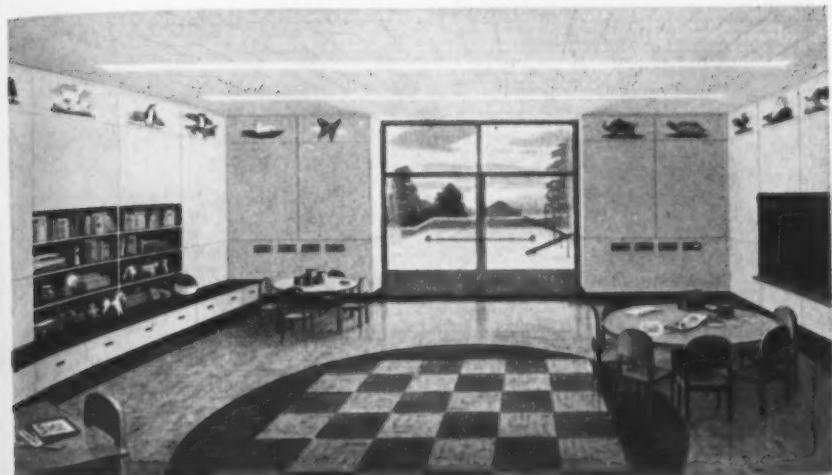
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These quiet, attractive, modern schoolrooms are typical of the Johns-Manville Unit System. They are structurally flexible, yet have all the qualities of permanent and solid construction. The clean-cut, projection-free Transite Walls may be easily cleaned by a simple washing—an advantage that makes a big difference in the maintenance budget. Notice the noise-absorbing, demountable Acoustical Ceilings with fluorescent lighting, and the colorful, resilient Asphalt Tile Floors.

Think of it! Whole school interiors can now be completely flexible... at low cost!

WHATEVER the educational needs of a community may become, Johns-Manville Unit Construction allows easy and economical rearrangement of school interiors to meet new requirements.

You can expand, convert, or subdivide schoolroom units *at will*. You can vary the size or arrangement . . . make all the changes necessary to adapt interiors to new conditions; as, for instance, from academic to vocational . . . from grade school to junior high . . . from two-unit study halls to one-unit kindergartens.

Three Johns-Manville Materials are combined in Unit Construction . . . all under *one* specification, *one* manufacturer's responsibility:

1. **Movable Walls** . . . quickly erected or dismantled; 100% salvageable; made of asbestos-cement Transite panels.
2. **Acoustical Ceilings** . . . reduce distracting noise. Demountable units can be taken down and relocated as desired.
3. **Colorful, Resilient Floors** . . . quiet underfoot. Small units permit easy extension of floor pattern.

All these constituent parts are durably built to last as an *integral* part of the building . . . and, being easy to clean, hard to mar, they make possible substantial economies in maintenance.

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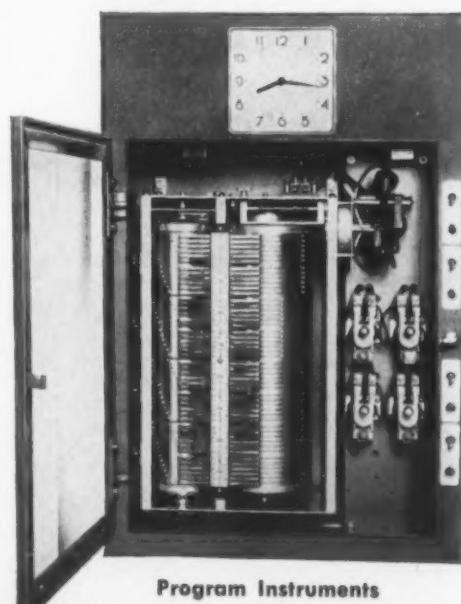
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Teachers' Salaries

INDEPENDENCE ADOPTS SINGLE SALARY SCHEDULE

Superintendent W. E. Matthews reports that the Independence, Mo., board of education, has adopted a new single-salary schedule to be retroactive to September 1, 1945. Ninety-five per cent of the schedule will be paid this year.

Class I provides for those teachers with less than 120 semester hours' credit to receive a minimum of \$1,200 and a maximum of \$1,392 at the end of 9 years of service. Teachers with less than 120 hours' credit will no longer be employed. However, those teachers in the system who have less than 120 hours' credit are taken care of in Class I.

Class II provides that teachers with 120 hours' credit will receive a minimum of \$1,380 with yearly increments of \$60 for 15 years, making a maximum salary of \$2,220.

Class III for teachers with a master's degree begins at \$1,560 and is given a yearly increment of \$60 for 18 years, making a top salary of \$2,580.

Class IV for teachers who have a master's degree plus 32 semester hours applicable toward a Doctor's degree begins at \$1,725 and is given a yearly increment of \$60 and has a maximum salary of \$2,745 at the end of 18 years.

Class V for teachers with a doctor's degree begins at \$1,785 and is given a yearly increment of \$60 for 18 years, making a top salary of \$2,805.

All salaries are paid on a 12-month basis.

Grade principals will receive the salary on the schedule to which their hours' credit and years' experience entitles them, plus \$300, plus \$2 per month per teacher under their supervision during 12 calendar months of the year.

Teachers with experience of one, two, or three years prior to employment, will be credited with one year, and one for each succeeding group of three years.

All substitutes will receive the same salary paid to the regular teachers whose position they are filling which shall in no case exceed \$7 per day. When a substitute is called for one-half day the salary shall be \$4.

Librarians, nurses, secretaries, and other employees except janitors, if qualified as teachers, will be placed on the teachers' schedule. Employees who are not qualified as teachers will not receive higher pay per month than the beginning salary for teachers.

TEACHERS' SALARIES

► Providence, R. I. The school board in denying a request of teachers for a \$200-a-year bonus, has decided to continue the temporary cost-of-living bonus at the \$100-a-year rate for the school term ending June 21, 1946. There is no provision in the budget for a bonus in excess of \$100 a year.

► Gloucester, Mass. The school board has voted to continue the present \$150 cost-of-living bonus for the next school year.

► Columbus, Ga. Teachers in the city schools have been voted a fifteen per cent salary increase by the board of education. The salary proposal, which now goes before the city commission for approval, will amount to \$75,000 a year.

► Lynn, Mass. The school board has voted to incorporate salary increases of \$300 a year into the compensation of teachers and janitors as a part of their permanent salaries, beginning January 1, 1946.

► Marlboro, Mass. The 1946 budget of the school board includes the \$200 permanent salary increase granted school employees, which became effective January 1, 1946.

► North Adams, Mass. The school board plans pay-roll increases of \$19,000 for school employees during 1946. These increases will be in addition to the pay increases granted in 1945, which included a \$12,000 increase in the original appropriation in February, 1945.

► Haverhill, Mass. The school board has taken

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action eliminating the wartime bonuses for teachers, supervisors, clerks, and janitors, and has voted a \$200-a-year bonus for all school employees. The bonus which became effective January 1, 1946, gives teachers \$125 a year more than they formerly received, and clerks \$130 more a year.

► Chicopee, Mass. The school board is expected to take action making the \$6 weekly cost-of-living increases permanent for all school employees during the next year.

► Brookline, Mass. The school board has adopted a new salary schedule, with provisions ranging from \$1,400 for kindergarten teachers with no degrees, to \$3,300 for high-school teachers with master's degrees. The salary of the superintendent was raised from \$7,000 to \$8,000 annually, and the headmaster of the high school from \$5,000 to \$5,600 per year.

► The county board of education of Fayette County, W. Va., has reported the approval of a

special levy to continue a wartime \$15-a-month increase for all teachers in the county. The increases will be continued until the spring of 1949.

► Hartford, Conn. The school board has voted to give salary increases to all employees in addition to the cost-of-living adjustment. The raises will require an increase of \$110,500 in the budget.

► Racine, Wis. A resolution adopted by the school board, provides that all regular employees of the board shall receive a \$16-a-month bonus, retroactive to January 1. The bonus payments will be made in 12 equal monthly installments. The city council has provided \$68,000 for salary increases.

► Marblehead, Mass. The school board has voted to make permanent the war raises given to teachers to meet the cost-of-living situation. The increases which amount to between \$280 and \$300 will be given to all school employees, except those who work in the cafeteria.

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LABORATORY EQUIPMENT DIVISION

School Law

School Lands and Funds

The New Jersey statute authorizing school district boards of education to contract for the transportation of children to and from schools, including other than public schools, and a resolution of the township board of education for the transportation of children to designated schools, including some not connected with the public-school system, are not unconstitutional as authorizing such board's use of any of its apportioned share of the income of the state school fund to pay the cost of transporting pupils to parochial schools. N.J.S.A. 18:10-1 to 17, 18:14-8; N.J.S.A. art. 4, § 7, par. 6.—*Everson v. Board of Education of Ewing Township*, 44 Atlantic reporter 2d 333, N. J.

A will, devising a testator's residuary estate in trust for the establishment of an industrial school, which should be Protestant in ethics and teaching, but otherwise undenominational, provided for the establishment of a sectarian school, for the support of which a village had no constitutional authority to issue bonds or expend tax funds, as required by the will, if it accepted the trustees' offer of such residue for the establishment of a school therein. Ohio const. art. 1, § 7; art. 6, § 2.—*Findley v. City of Conneaut*, 63 Northeastern reporter 2d 449, modified 62 Northeastern reporter 2d 318, 145 Ohio St. 480, Ohio App.

School District Government

Powers conferred on a board of education can be exercised only at regular or special meetings of the board. Smith-Hurd statutes c. 122, § 119.—*Pratt v. Board of Education of Dist. No. 61, Kankakee County*, 63 Northeastern reporter 2d 275, Ill. App.

A Pennsylvania statute providing for the removal of school directors by a court of com-

mon pleas is directed at nonfeasance in office, rather than at malfeasance or misfeasance, so that to remove a director for criminal acts, resort must be had to indictment and conviction. 24 P.S. §§ 180, 309; P.S. const. art. 6 §§ 3, 4.—*In re Kline Township School Directors*, 44 Atlantic reporter 2d 377, 353 Pa. 91.

Where school directors are charged with extortion by taking money illegally under cover of their office, or with conspiracy to defraud the school district, the proper procedure for their removal requires a resort first to criminal process, with removal following conviction. 18 P.S. § 4318; 24 P.S. §§ 180, 185-187, 212, 331, 345, 353; P.S. const. art. 6, § 4.—*In re Kline Township School Directors*, 44 Atlantic reporter 2d 377, 353 Pa. 91.

School District Property

A school district was not liable for injuries to a boy, thrown to the ground by three other boys on the playground of the school premises, as the proximate cause of the accident was the unforeseen intervention of such other boys, not the district's failure to maintain the playground in a reasonably safe condition.—*May v. Board of Education of Union Free School Dist. No. 1, Town of Mamaroneck*, 58 N.Y.S. 2d 127, N. Y. App. Div.

School District Taxation

An Illinois statute authorizing school districts to issue anticipation warrants against taxes levied, payable solely from such taxes when collected, to be set apart for such payment, creates a trust and constitutes the school treasurer a trustee.—Smith-Hurd statutes, c. 112, § 125.—*Pratt v. Board of Education of Dist. No. 61, Kankakee County*, 63 Northeastern reporter 2d 275, Ill. App.

An Illinois ballot, wherein the voter has no choice but to vote in favor of increasing the taxes both for educational and building purposes, or to vote against both such proposals, is invalid.

and no increase in the rate is authorized as a result of an election at which such a ballot is used.—*People ex rel. Pickerill v. New York Cent. R. Co.*, 63 Northeastern reporter 2d 405, Ill.

Pupils and Conduct of Schools

A New Jersey statute authorizing school district boards of education to make rules and contracts for transportation of children to and from schools, including other than public schools, and a resolution of the township board of education, providing for the transportation of school children to parochial schools as well as public schools, do not violate the provisions of state constitution as to religious freedom or the fourteenth amendment. N.J.S.A. 18:14-8; N.J.S.A. const. art. 1, pars. 3, 4; U.S.C.A. const. amend. 14.—*Everson v. Board of Education of Ewing Township*, 44 Atlantic reporter 2d 333, N. J.

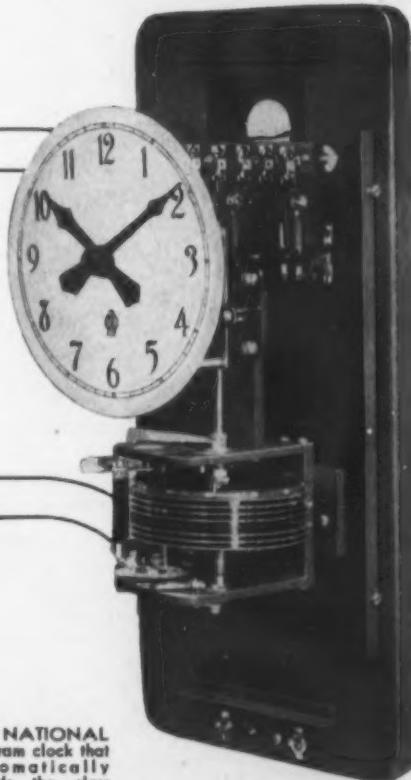
Where a county board of education had before it recommendations of local trustees as to the re-employment of specified teachers, and the matter of giving notices to the teachers who were not to be re-employed was discussed by the board and superintendent, and on the superintendent's recommendation, the board authorized notices, which the superintendent issued and served on such teachers, the evidence sustained the finding that the board did not delegate the board's discretionary powers of employment of teachers to the superintendent, even though the superintendent exercised much influence over members of the board. Ala. code of 1940, Tit. 52, § 351 et seq.—*Rough v. Board of Education of Marshall County*, 14 Southern reporter 2d 508, Ala.

Compulsory education is a matter of public concern and legislative regulation, and it should be enforced so long as statutory requirements are reasonable, subject to constitutional limitations. N.J.S.A. 18:14-14, 18:14-34.—*Everson v. Board of Education of Ewing Township*, 44 Atlantic reporter 2d 333, N. J.



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School Board News

NEBRASKA SCHOOL BOARDS MEET

The Nebraska State school boards association in convention at Hastings, January 8 and 9, went on record as supporting the proposed "40 amendment" to the state constitution following a vote taken at the closing banquet of the annual convention.

Under the amendment the legislature would pay \$40 per pupil to the state's schools as assistance.

Principal speaker at the banquet, which culminated a day of round-table discussion and speeches, was Dr. Floyd Reeves, professor of education at the University of Chicago. Dr. Reeves supported rural school redistricting, state support, and federal aid.

Resolutions passed by the association also included one for broadening the tax base to support the state aid program; appointment of a committee to study the tax base and a recommendation to the legislature to pass redistricting laws.

All officers were re-elected. They are R. A. Greenslit, Stanton, president; Earl Freeland, Ax-tell, vice-president; Alice Arlene Greenslit, Stanton, secretary-treasurer.

AMONG BOARDS OF EDUCATION

► The school board of Dist. No. 403 at Kelso, Wash., has joined with several other districts in making a test case of the bond-election laws which are in conflict as to the requirement of the number of votes to legalize a bond election.

► St. Louis, Mo. The "antipatronage" rule of the board of education has been repealed and a merit system for the selection of noncertified employees has been substituted for it.

Under the new rule, all employees, except teachers and executive officers, will be selected on the basis of competitive examinations, administered by a three-man board of examiners made up of certain officers of the board. These are the chief engineer in the building department, the assistant superintendent in charge of teacher and pupil personnel, and a third man to be chosen by the president from a list of three names to be submitted.

► Redford, Mich. The union school board has voted to appropriate \$2,000 toward the financing of a hot-lunch program for the schools.

► Lansing, Mich. The school board has adopted a new policy, which rescinds a former practice of denying use of schools to political parties. Political groups in the city now have the privilege of using school buildings to express their beliefs and for meeting places.

► Dearborn, Mich. The school board has adopted new tuition rates for nonresident pupils. The rate for the high school is \$113.50; for the elementary schools, \$50; and for special education classes, \$100 per year.

► Kalamazoo, Mich. The board of education has taken steps toward revamping the financial support of public activities involving recreational programs. For a number of years the school board and city commission jointly shared the cost of supporting the recreational program. The board now proposes to contribute \$5,310 remaining in the recreation appropriation for 1945-46, and to provide a further \$10,000 to finance its share through December 31, 1946.

► Malden, Mass. The school board has raised the tuition for nonresident pupils by \$50, making the tuition \$150 in the senior high school, \$125 in the junior high schools, and \$100 in the elementary schools. The new figures are more commensurate with the per pupil cost in the school system.

► Marlboro, Mass. The school board has voted to give only one type of diploma to high-school graduates in the future. Up to the present there have been three types of diplomas—college, commercial and general. Pupils who complete the required number of credits will receive a general high-school diploma.

► Fayetteville, W. Va. The citizens of Fayette County have approved a bond issue and special levy of \$1,445,000, the proceeds to be used for new school construction. The bond issue was carried after having twice been defeated during the past 10 years. The school authorities will make application for a federal grant, provided such funds are made available in the near future.

► Marietta, Ga. The city, through its mayor and city council, has assumed responsibility for a school-building program, to include additions to two schools, and the construction of a Negro grammar school. The school board has voted to add a new grade to put the schools on a 12-year basis. The program will be put into effect without an increase in taxes.

► Tyler, Tex. The voters have approved a bond issue of approximately \$1,000,000, the proceeds to be used for the improvement of the school buildings. Of the total amount, \$500,000 will be used for the construction of a junior college building. The balance will be devoted to the erection of a Negro high school, an elementary building, two gymnasiums, and the renovation of existing buildings.

► Manitowoc, Wis. The school board has passed a rule that all employees 65 years of age or over will be permitted to continue in their positions for the 1946 school year.

► Okmulgee, Okla. The school board has approved a plan for the education of war veterans, to be conducted through the local schools on a job-training basis. A committee has been appointed to pass on applicants for training.

► Kenosha, Wis. Enrollment in industrial-arts classes in the high school has been curtailed for the next semester, due to a lack of sufficient space. The courses affected are printing, cabinet-making, electricity, and machine-shop work.

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School Building News

THE SEATTLE BUILDING PROGRAM

The 1945-46 building activities of the board of education of Seattle, Wash., began in 1944 with the creation of a prebuilding planning committee, consisting of principals, teachers, and lay citizens together with members of the superintendent's staff. The aim of the planning committee was the preparation of a building program designed to fulfill the postwar purposes which Seattle has in mind for its children. The committee made recommendations with reference to the areas of instruction for each type of school and the way the instruction in those areas was to be provided. These considerations were important in determining the type of facilities to be constructed for the various school subjects. Other recommendations included acoustical treatment and soundproofing, expansion of plumbing facilities, gymnasiums and auditoriums, wider use of school buildings, and standards for heating, lighting, and ventilation.

The work of the prebuilding and staff building committees went on for several months. The preceding studies had revealed factors which will take a vital place in the planning of future facilities.

Evidence revealed by earlier studies indicated the necessity for new construction and improvements in gymnasiums for junior and senior high schools. Need for expansion of high-school athletic facilities had been demonstrated and plans are now being made for the location and construction of an all-city athletic center.

It is evident that the filling of the over-all housing needs of the district will require a period of several years because of the amount of money involved. The amount of money now on hand will allow for only the most urgently needed construction.

It is anticipated that the district will have approximately \$2,065,000 in its building fund when tax receipts become available in 1946, so that it will be in an enviable condition. It will be in position to make application for state or federal funds which may become available for school construction. With funds on hand the district can join in the program of community construction, and thus utilize materials and men who will be released from the war's prosecution.

By successive steps, as building funds become available, the building program approved by the voters in November, 1944, will go forward so that Seattle will have facilities to serve a sound educational program to the best advantage.

FAIRFIELD POSTWAR BUILDING PROGRAM

The board of education at Fairfield, Ala., has begun plans for a postwar building program and has employed E. R. VanKeuren as architect to prepare the plans and specifications for the new buildings. The total cost of the entire program is approximately \$500,000.

The program will comprise a physical-education building and a vocational-shop building for the senior high school; an auditorium for the junior high school; a 12-classroom building for an elementary school for Negro pupils; a vocational-shop building for the Negro industrial high school; a stadium for the athletic field; and a new site for the Fairfield Industrial High School. The construction work on the projects will be started if, and when, funds are available.

INDIANAPOLIS APPROVES LONG-RANGE SCHOOL-BUILDING PROGRAM

The board of education of Indianapolis, Ind., has approved a long-range building program, prepared by the building committee, which involves seven high schools, a third of the 82 elementary-school buildings, and 22 branches of the public library.

Vice-president Clarence Farrington, chairman of the building committee, who in December, 1945, presented recommendations for immediate

action, read a statement of future building needs. Nearly 30 of the elementary buildings are over 40 years old, the report stated, and their replacement with modern buildings is imperative.

Among the proposals for immediate action were the construction of an addition to School 26, a Negro junior high school, the purchase of sites for two elementary schools, and the construction of a north-side branch library.

The report urged the school officials to begin a careful study of population trends and accommodations in order to ascertain proper locations and probable building needs in rapidly growing areas; needs for modernization, expansion, replacement, or abandonment of present structures; and means for obtaining funds within the bonding limitations of the school city.

Action construction of the Emmerich Manual Training High School will be started as soon as conditions permit, and floor plans are being drawn for the structure which will occupy a site of 23 acres near the school's present athletic field.

The recommendations also include the Broad Ripple and Thomas Carr Howe high schools which call for large additions.

The plans also call for the replacement of three old buildings of the Civil War period and several portable structures of the Arsenal technical schools. A new girls' gymnasium and auditorium are planned.

Better physical-education facilities, shop rooms, and ROTC rooms are planned at Crispus Attucks, George Washington, and Shortridge High School.

An addition to one of the elementary schools, now nearing completion, will be available shortly. The board has purchased two new elementary school sites in new residential sections north and east of the city.

SCHOOL BUILDING NEWS

► Midland, Tex. The school board has let the contracts for the construction of two elementary-school buildings, to be completed and ready for use in September, 1946.

► Bristol, Va. The board of education has completed plans for a postwar school-building program, to include (1) an addition to the high school, (2) a 12-room school unit for West Bristol, (3) an addition of eight rooms and auditorium for the Highland View School, and (4) additional new buildings to provide for the new 12-grade system. Another project is the proposed revision of the school curriculum to meet the needs of returning war veterans.

► Brigham, Utah. The voters of the city have approved a proposal for a school-bond issue of \$600,000, to be used for financing a school-building program. The board is unable to secure building materials and labor and so has invested the whole amount in U. S. Government bonds bearing interest at 2.5 per cent. An architect is at present engaged in preparing plans and specifications so that the construction work may be started as soon as materials and labor are available.

► Taylor, Tex. The voters have approved a proposal for a school-bond issue of \$125,000, the proceeds to be used in financing a school-building program. The program will include additions to an elementary school, improvements to athletic park, an auditorium for the Blackshear School, and general repairs and improvements to the school plant.

► Manitowoc, Wis. The board of education has voted to relight the tower of the Lincoln High School, after a lapse of four years. The estimated cost of keeping the tower lighted is less than 50 cents an hour. The lights will be thrown on at dark and continue to burn until 11 p.m.

► Shelbyville, Ill. The board of education of the Shelbyville Community High School District has sold \$233,000 in building bonds of the \$246,000 authorized at last spring's election. The board has purchased a site and employed an architect to prepare plans for a new high-school building, to be erected late in 1946 or early in 1947.

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School Finance and Taxation

► Worcester, Mass. The school board has approved its 1946 budget, calling for \$3,630,826, which is an increase of \$591,592 over the past year. The board has approved an increase of \$18,915 in the salary account, to cover changes recommended in a recent school survey.

► Holyoke, Mass. A tentative budget of \$879,200 for 1946 has been prepared by the school board. Of the total, \$805,900 is for the operation of the schools.

► Pittsfield, Mass. The new budget of \$981,089, adopted by the school board for 1946, represents an increase of \$122,666, due principally to the equal-pay law. About \$90,000 is needed to meet provisions of the equal-pay law and the salary increases.

► The consolidated school district of Bennett, Iowa, has purchased \$130,000 of U. S. 7% per cent certificates of indebtedness, which mature on December 1, 1946. The bonds will be sold as funds are needed for a school-building project.

► A total of 399 Iowa school districts have received emergency levies, aggregating \$1,206,975, for the current school year. The levies were authorized by the 1943 legislature to aid school districts where increased expenses raised costs for school operation.

► Supt. Omer Carmichael, of Louisville, Ky., has asked the city board of alderman for permission to increase the school budget by \$260,186, to provide increases of \$167 for each of the teachers.

► Greenfield, Mass. The school board has adopted a budget of \$357,386 for the year 1946, which is an increase of \$21,967 over the year

1945. Approximately \$10,000 of the increase is due to the teachers' salary schedule, the restoration of salary cuts, and evening-school activities.

► Lowell, Mass. The school board has adopted a budget of \$1,349,728 for the school year 1946, which is an increase of \$54,728 over the year 1945, necessitated by general increases in costs.

► Texas City, Tex. The board of education will shortly begin the new building program, calling for the construction of two elementary schools, a high school, and an athletic plant. Bonds in the amount of \$750,000 have been approved for the financing of the program.

► San Antonio, Tex. The voters have approved a proposal for a school-bond issue of \$2,166,000. The proceeds of the bonds will be used for the rehabilitating and reconstructing of 35 school units. The two largest projects are additions to the Vocational and Technical School and the Lanier High School, to cost \$300,000.

► Shreveport, La. The voters of the city have approved a proposal for a \$6,250,000 school-bond issue, the proceeds to be used for a complete building program to include four new junior high schools, three elementary schools, and one Negro high school, as well as the remodeling of one senior high school, and provisions for larger play space.

► Springfield, Mo. The voters have approved a \$1,250,000 school-bond issue, the proceeds to be used in financing the construction of two new schools, and the expansion of the junior high schools. The next step will be the employment of architects to prepare the plans and make specifications for the new buildings.

► Tulsa, Okla. The school board is proceeding with plans for an extensive school-building program, following the approval by the voters of a \$4,500,000 postwar school-bond issue. Construction work will be started as soon as the shortage of materials and labor is removed.

► Quincy, Mass. The board of education has set up its budget for 1946 calling for a total of \$1,628,000 for the operation of the schools during the year, which is an increase of \$238,000 over 1945. A large part of the increase is due to a \$200,000 item for repairs and maintenance of buildings.

► Malden, Mass. The school board has adopted a budget of \$875,000 for the year 1946, which is an increase of \$53,570 over the year 1945. It includes an item of \$36,000 for the \$100 bonus for teachers.

► Leominster, Mass. The budget of the school board calls for \$499,966 for the year 1946, which is an increase of \$30,083 over the year 1945. Included in the budget is \$374,000 for salaries, and \$72,720 for department expenses.

► Detroit, Mich. The board of education has asked the municipal government to clear the way for asking the public to authorize additional taxes for school buildings and repairs over the next five-year period. The action followed a report of Supt. Arthur Dondineau, in which he pointed out that the budget of \$26,872,000 would be insufficient for financing buildings, land, equipment, and other capital costs.

► Lowell, Mass. The school board has approved salary appropriations of \$1,230,679 for the school year 1946. Broken down, the estimates include salaries of the superintendents amounting to \$11,100; salaries of teachers, general, \$950,000 which was reduced to \$938,000; trade-school salaries and nonteaching positions amounting to \$93,324; and civil-service positions amounting to \$176,255.

SCHOOL ARCHITECTS FIRM FORMED

Mr. John E. Nichols, formerly supervisor of school buildings and plans for the Connecticut State department of education, has recently resigned to engage in private architectural practice. He will be associated with Mr. Ernest Sibley, who for many years has been engaged in the designing and supervision of school-building projects.

The new firm of Sibley & Nichols will be located at 7 South Main St., West Hartford 7, Conn.

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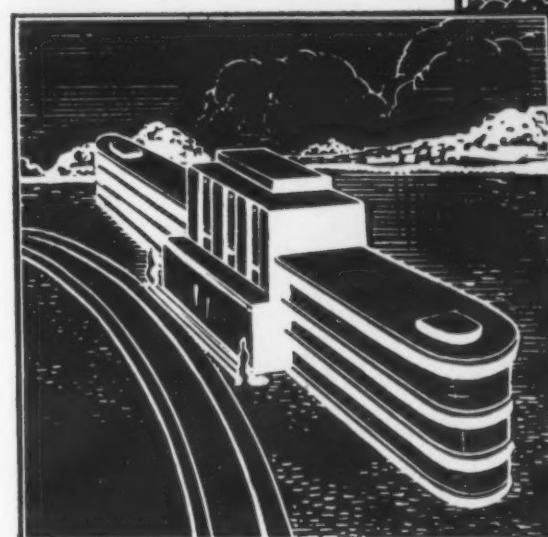
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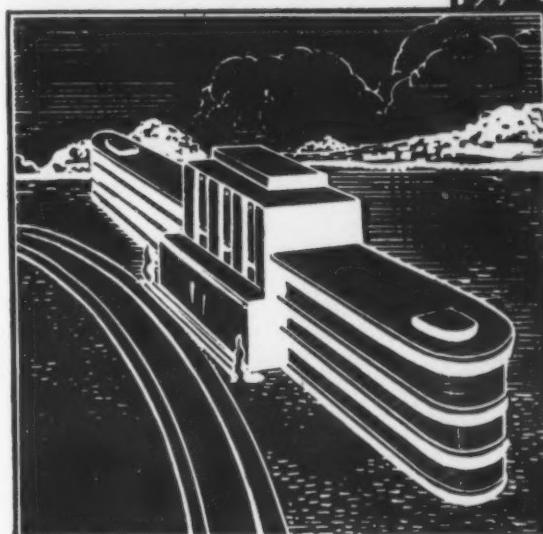
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The time isn't too far off when you will have a choice of the kind of washroom towels you will be able to purchase for your school. When that time comes, don't buy "just towels," but think in terms of purchasing —

FAST ABSORBENCY

Ability of a towel to absorb the water on the hands quickly and completely.

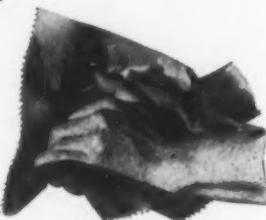


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Combination of strength, absorbency and softness giving greater drying capacity.

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Ability of a towel to hold together during the drying process.



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A Kindergarten Report Card

Supt. M. N. Todd, of Lawrenceville, Ill., has prepared the outline for a complete study of the development of kindergarten children for the joint benefit of teachers and parents. The report which is made up quarterly provides a fairly complete orientation of the abilities and aptitudes of each child in the junior kindergarten. The purpose is to help the teacher thoroughly understand the child and to adjust her teaching and guidance to overcome faults and to develop the good characteristics. Parents are requested to use the report for reinforcing their understanding of the child and

for assisting the school in correcting difficulties and in preparing the child for a successful school career.

The reports are made out in duplicate for the parent and the school. The latter is available to the first grade teacher when the child is promoted.

The form provides space for the name, the date and place of birth of the child, the names and addresses of the parents and their telephone number, and essential health data concerning vaccination and immunization.

Social Development

- Adjustment to group and teachers
- Ability to work and play happily with and around others — ability to adjust — doesn't always take the same partner
- Respects the right of others
- Co-operation
- Self-reliance
- Truthfulness
- Willingness to share
- Willingness to take turns
- Willingness to follow directions, be kind and helpful to other children
- Shyness
- Sensitiveness to criticism
- Desire to contribute
- Dependability
- Rejoice in success of others
- Ability to resume responsibility
- Attitude of child toward himself
- Regular attendance

Physical Development and Muscular Co-ordination

- Muscular control in general
- Ability to walk in difficult ways; backwards, sideways, narrow places, elevations, etc.
- Posture — to stand erect, feet together, chest forward, head up
- General resistance to colds
- Resistance to fatigue
- Hand-eye co-ordination
- Ability to tie shoestrings
- Use of tiptoes
- Body balance — very little stumbling, falling, tripping
- Ability to walk up and down stairs, on ball of foot — alternating feet
- Ability to skip and hop
- Ability to climb with confidence and security
- Ability to grasp and handle objects securely
- Ability to carry objects correctly with balance; carry and pour liquids without spilling
- Ability to know right hand from left

Mental Development

- Attitude of investigation
- Ability to concentrate
- Interest in things going on
- Imagination
- Persistence to overcome obstacles
- Carry work through to completion
- Make good use of spare time
- Independent thinking and acting
- Ability to plan, choose, and decide
- Ability to reason
- Ability to make clear observations
- Ability to give attention
- Ability to learn by doing
- Alertness
- Growth in ideas
- Responsive to suggestions
- Memory in general
- Binet Test of intelligence
- Ability to follow one line of thought
- Desire to keep the room clean and neat — clean up
- Recognizing groups of objects up to 10

Emotional Development and Nerve Control

- Confidence in self and others
- Entertains positive attitude to school activities and an objective attitude toward self
- Emotional stability as shown by control of fear
- Control of situation
- Control of crying
- Control of excitability
- Control of nervous laughter, loud voice
- Control of anger
- Calmness, inwardly and outwardly

Nervous Tension as Shown By:

- Loud laughter, loud voice
 - Sudden spurts of nervous energy
 - Sudden jerky movements
 - Aimless wandering around
 - Cries easily and often
 - Oversensitive
 - Frustration in work and play
 - Thumb-sucking
 - Hair pulling, nail biting, bothering children nearest him
 - Sense of humor
 - Cheerfulness, joy, contentedness
 - Wholesome development of affection
 - Activity constructive and purposeful
 - Freedom from strain
 - Ability to read quietly, relaxed
 - Bothers other children during rest
 - Neuromuscular control — active, alert, energetic participation in activities coupled with ability to sit or stand quietly when occasion demands
- (Concluded on page 84)

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PENCIL SHARPENER

A KINDERGARTEN REPORT CARD

(Concluded from page 82)

Courtesy

Simple introductions — "Mother, this is my teacher," "Bobby, this is Billy."
Say, "Thank you," "No, thank you," "Please," "Pardon me," etc.
Recognize visitors when they come to our room
Shake hand correctly
Not interrupt when others are talking
Not crowd in front of others in line — take turn
Serve first last when passing things
Take one nearest when being passed things
Open and close door quietly
Listen while others are talking

Language

Speak correctly, clearly, distinctly, and loud enough to be heard
Vocabulary range
Form clear, correct sentences
Constantly add new words to vocabulary
Pronounce "th," "t," and "w"
Sound final consonants in words
Ability to compose and dictate to teacher — letters, stories, poems, songs, etc.

School Skills, Paper Cutting, and Paste

Ability to cut paper on the fold
Use of scissors
Use of paste — neatness

Block Building and Sand Play

Manipulation only
Good ideas carried out
Use of experiences

Art and Clay Modeling
Manipulation only
In experimental stage
Definite ideas carried out
Form and proportion
Appreciation of art
Handling of crayons
Handling of brushes and paint
In experimental stage
Drawings and paintings beginning to take form
Drawing and painting to represent an idea
Color combination and arrangement

Recognize colors and name them
Use of picture when finished to tell story

Music

Listen to music
Shows interest in music
Melody
Discriminate between tone qualities
Ability to repeat musical tones they hear

Singing

Pleasure in singing
Ability to sing with other children
Ability to originate songs
Learns songs quickly

Rhythm

Ability to respond through following others
Ability to originate responses
Develop time through clapping, stepping, etc.
Ability to use whole body in response to music
Ability to skip, jump, leap, gallop, run, march, walk, starting with either foot

Literature

Listens with interest to stories and poems
Ability to retell short story

Ability to make up original stories and poems
Anticipate what comes next in stories
Original stories show imagination

Appreciation of the humorous
Learns short poems and rhymes quickly

Ability to dramatize a story
Interest in books

Ability to care for books correctly
Learn to say the safety rhyme and cross the street safely

Contribute to a helpful conversation period
Reading readiness — recognize signs, labels, names of objects, own names, titles of books, titles of pictures, etc.

Ability to tell sequence stories
Ability to memorize poems

Kindergarten Teacher
M. N. Todd, Superintendent.

AN INTERESTING LIGHTING SURVEY IN MAINE

A lighting survey, conducted in 434 schools of 130 communities in the state of Maine, reveals that a significant proportion of the children in schools of all grades and types have been provided

with inadequate illumination, both natural and artificial. The survey, based on information gathered by the Central Maine Power Co., in collaboration with the Maine Public Service Co., and the Bangor Hydro-Electric Co., was made available to the state department of education through the courtesy of the Central Maine Power Co.

The tests, conducted by experts employed by the power companies, and the results from 434 schools, gave an over-all picture of the lighting situation in Maine public schools, which is far from reassuring to educators.

That the lighting defects are confined to no special type of schools was revealed by the fact that 121 of the classrooms surveyed were in one-room buildings; 1416 in preprimary and elementary schools; and 649 in high-school classrooms. The basis for the measurement of the rooms was the foot-candle and the minimum standard of 15 foot-candles set up for schoolrooms by the Illuminating Engineering Society.

Under medium and bright weather conditions, from 19 to 27 per cent of the children in the schools studied were provided with illumination of less than 15 foot-candles.

While many elementary schools have windows on both sides, the study showed that the rooms were generally equipped with dark painted walls and ceilings which absorbed a great deal of light, and which may be responsible for the poor showing in the test. In many cases, a very high foot-candle reading for seats near windows indicated the need for control and direction of natural light to protect the children from glare. A foot-candle reading of 315 in one classroom, for a row of desks nearest the window, indicated that under schoolroom conditions, the pupils may be working in a glaring light which sets up a strain on the visual organ and damages it.

A large proportion of the schoolrooms covered by the survey did not have sufficient window area to correspond to accepted standards (20 per cent of window area in relation to floor area).

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- 3 Opening and closing of Gymstand is extremely simple, because of ingenious exclusive design and construction features.
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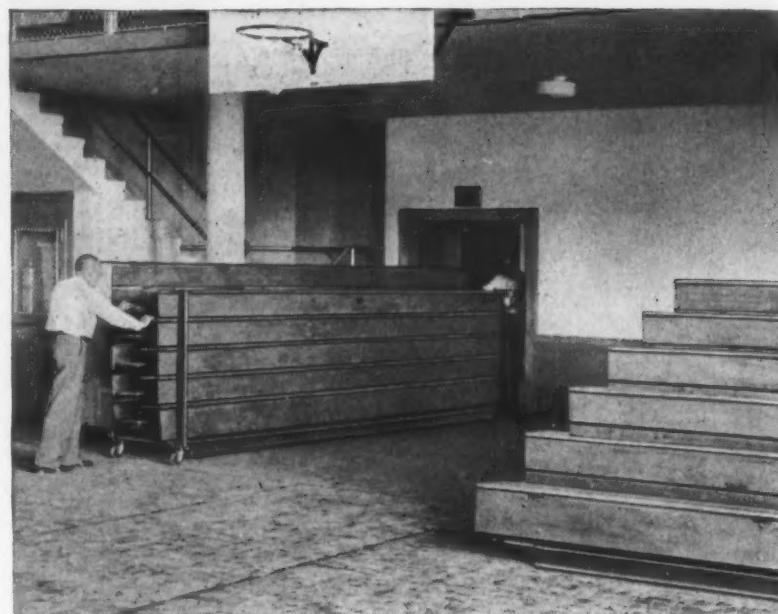
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LEADING THE SCHOOL LEADER

(Concluded from page 57)

position to tap a deep reservoir of creative energy within his organization.

If the leader will establish this pattern, ultimately every individual will feel that he is important to the organization. This must be accomplished rather by example than by precept. After the leader has by his attitude demonstrated to his executive staff that he considers it of first importance to have free and unobstructed circulation of thought within that group, each member will pursue the same policy within his individual sphere of influence. The process will continue down through the organization. In the end everyone will become conscious that his contribution is not only simply expected of him; it is needed. It is a question of opening floodgates—and the leader holds the key.

The energies and abilities of the people in a business are its lifeblood. In the human body, life depends upon perfect circulation. In a business organization, life and health depend upon the circulation of the thoughts governing the energies and abilities of the people in it. The leader must contrive diligently to obtain a wide distribution of the feeling of responsibility for the health of the business. He must provide the impulse just as, in the human body, the heart provides the impulses which sustain blood circulation. The head of the business must in fact be its heart. And I mean "heart"—with all the connotations of the word.

The ideal we strive for is that each individual may feel he is needed and that he is useful. The pay envelope must not be permitted to become the sole basis for the relationship between the individual and the organization. The pay

envelope must take its place simply as one of the tangible by-products of usefulness.

That ideal will be reached when all the people in the organization become unselfishly absorbed in the service the organization aims to perform. And the example for all this must be set by the leader, whether he be the head of the business or the head of a department.

SICK LEAVE GRANTED TEACHERS

During the past year the San Antonio, Tex., board of education passed a cumulative sick-leave rule, under which absence without loss of pay, for reasons of personal illness, will be granted upon the following basis: (a) five working days annually to 9-month employees; (b) six working days annually to 10- and 11-month employees; and (c) seven working days annually to 12-month employees.

The unused portion of the designated number of days within each year will be accumulative as follows: (a) 9-month employees, 30 working days' maximum; (b) 10- and 11-month employees, 36 working days' maximum; (c) 12-month employees, 42 working days' maximum. The number of days not used during the year 1944-45 will be credited as accumulated at the beginning of the year 1945-46.

Absence without loss of pay for a maximum of five days within a year will be granted for reasons of serious illness or death in the immediate family. Immediate family will be defined as husband, wife, child, father, mother, brother, sister, uncle, aunt, father-in-law, mother-in-law, grandfather, grandmother, or any member of the household.

BOARDS OF EDUCATION

► The school boards of Marion County, Ill., have voted to conduct a survey of school districts in the county. A nine-member survey group has been elected to have charge of the survey.

► The Iowa State Department of Public Instruction has prepared a set of recommendations under which every Iowa high-school youth who served in the armed forces will be given a minimum credit of one-half-year of high-school study. It will be possible for a youth who has completed two years of high school to receive a diploma upon his return from service provided he can pass certain intelligence examinations. It will be possible to earn additional credits for special instruction, for additional service, or for special assignments the veteran may have had in the service.

► Cleveland, Ohio. Remedial classes are conducted at John Adams High School for students who are slow in learning arithmetic, English, and reading. The students keep graphs on their progress. Students entering John Adams are given 40 questions to answer, covering the common branches. If they cannot answer 30 of them correctly, they join the remedial classes. Others who fail in the common branches are asked to take the remedial work. The supervisors of English and mathematics are enthusiastic about the classes. John Adams pioneered in this work.

SUPT. H. B. ALLMAN RE-ELECTED FOR FIVE YEARS

H. B. Allman, superintendent of schools of Muncie, Ind., since August 1, 1936, has signed a new five-year contract with the school board, effective August first next. The contract calls for a salary of \$8,000 for the first two years, and \$8,300 for the last three years.

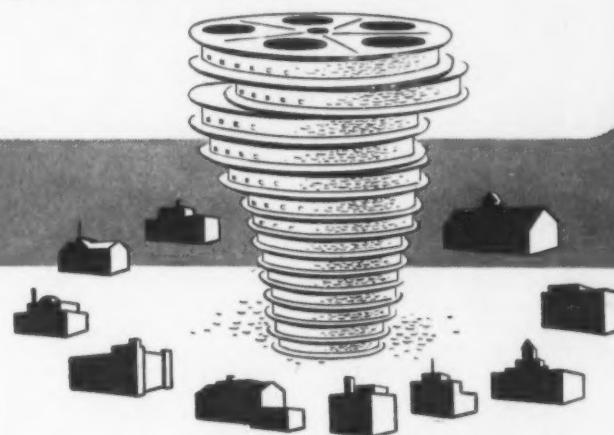
In commenting on Mr. Allman's re-election, the *Muncie Star*, in a leading editorial, points out the fact that the Muncie schools are "in good hands," and Mr. William T. Haymond, president of the school board, states that "he has proved himself worthy of his trust."

Mr. Allman is chairman of the teacher training and licensing commission of the Indiana State Board of Education. He has served as president of the Indiana Teachers' Association, the City and Town Superintendents' Association, and the Indiana Schoolmen's Club. He is chairman of the committee on tenure and academic freedom of the N.E.A.

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Lower Cost! A comparison of the cost of a Cooperative Film Library program with that of renting (including transportation costs and charges for extra days) shows that the Cooperative plan saves money for its members. Further, after two years the schools *own* their films and can use succeeding yearly budgets to acquire additional classroom films.

Write for a folder telling more about this modern plan for increasing the scope and use of *classroom* films in your school. Address Encyclopaedia Britannica Films Inc., Dept. 10-B, 20 North Wacker Drive, Chicago 6, Illinois.

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Please mail me catalog of Audio-Visual Teaching Equipment. Also your new 1946 Film Catalog.	
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Personal News

PERSONAL NEWS OF SUPERINTENDENTS

- LYMAN B. OWEN, of Abington, Mass., has been elected superintendent of schools at Haverhill, Mass., to succeed Arlington I. Clow, who is retiring after 30 years of service.
- F. E. MULLER, of Independence, Iowa, has been elected superintendent of schools at Dearborn, Mich., to succeed Harvey H. Lowrey.
- ERNEST R. BRITTON, of Effingham, Ill., has accepted the superintendency at Midland, Mich.
- E. PHILLIPS BLACKBURN, of Union City, Ind., has accepted the superintendency at Hartford City, where he succeeds Joseph C. Wagner.
- Supt. C. T. HOLLAND, of Wessington Springs, Mo., has been re-elected for another school year.
- CARL J. ROBINSON, who has been in service in the Navy, has returned to fill his old position of superintendent of schools at Elgin, Iowa.

► JOHN J. MADDOX, assistant superintendent of schools at St. Louis, Mo., died at his home on December 25, following a heart attack. He was assistant superintendent since 1941, and prior to that he was principal of the Cleveland High School, and principal of the Woodward School.

► P. C. EMMONS, superintendent of schools at Mishawaka, Ind., has announced his resignation, to take effect July 31, 1946.

► DR. JOE R. HUMPHREY, superintendent of schools, and president of the Temple Junior College, Temple, Tex., has returned to his duties, after an absence of more than four years in the U. S. Navy. Dr. George H. Gentry, who had been serving as acting superintendent in Dr. Humphrey's absence, has assumed his duties as dean of the Junior College and principal of the high school.

► L. W. FEIK, superintendent of the Sioux City Public Schools, has announced that he will leave the teaching profession at the end of the current school year, after a teaching service period of 35 years. He has been superintendent at Sioux City, Iowa, since March, 1931.

Mr. Feik entered the Sioux City school system as a high school instructor. In 1916 he became an elementary

school principal, a junior high school principal in 1919, and a senior high school principal in 1926.

► Upon recommendation of its ethics committee the N. E. A. has dropped Dr. William H. Johnson, superintendent of the Chicago schools, from its membership. The association charged that he has violated its code of professional ethics in connection with the administration of the Chicago school system. Dr. Johnson is quoted in a Chicago newspaper as declaring: "The N. E. A. is controlled by a politically minded clique which wants to run the organization to suit itself. It is not representative of its members. I have no interest in its affairs."

► MR. CONRAD JACOBSON, superintendent of Holdridge, Neb., since 1932, has notified the school board that he will not accept re-election.

► DR. JOHN J. COREY, assistant superintendent of schools in charge of secondary schools, Denver, Colo., has resigned at the age of 62.

► MR. LOUIS J. COOK has been elected superintendent of school supplies for the New York city schools. He succeeds Maurice G. Postley.

► ED. S. COOK has been re-elected president of the Atlanta, Ga., board of education for the 11th consecutive year.

► JOSEPH H. MARTIN has been elected chairman of the Taunton, Mass., school board.

► MRS. MARY R. WHEELER has been elected the first woman president of the school committee of Worcester, Mass.

► The school committee of Revere, Mass., has elected J. VINCENT MURRAY, a veteran member, as chairman for 1946.

► J. M. HANKS has returned to his former position of superintendent of schools at Ysleta, Tex. F. W. COOPER, formerly acting superintendent, has been elected assistant superintendent.

► EDWARD G. SCHULTZ has been appointed director of guidance and visual education for the city schools of Fond du Lac, Wis.

► FRANK A. ROSS, of Rockport, Ind., has been elected superintendent of schools at Union City, to succeed E. Phillips Blackburn.

► ROY E. SIMPSON, of South Pasadena, Calif., has been appointed state superintendent of public instruction, to fill the unexpired term of the late Walter F. Dexter. Since 1939 Mr. Simpson has served as district superintendent of the South Pasadena Elementary School District and the South Pasadena-San Marino Union High School District.

► DAVID M. MORGAN, superintendent of schools at Mineral Point, Wis., has resigned in order to devote his entire time to his newspaper, the *Mineral Point Democrat-Tribune*.

► Supt. S. T. NEVELN, of Austin, Minn., has been re-elected for a three-year term, beginning with January, 1946. Mr. Neveln has been head of the city school system for 24 years, going to Austin from LeMars, Iowa, in 1921. During his long period of service, Mr. Neveln has seen the school enrollment increase 130 per cent. In 1940 a million-dollar, four-year building program was completed. Work is under way for a million-dollar program providing additions to elementary schools and a new elementary-school building.

In 1940, a junior college was established, by vote of the citizens, which is now a successful institution.

NEWS OF SCHOOL OFFICIALS

► DANIEL PAUL HIGGINS, superintendent of school buildings for the New York City board of education, has resigned after nine years' service to devote his time to his architectural firm. He was active as chairman of the committee on buildings and sites. Supt John E. Wade and Commissioner James Marshall commended Mr. Higgins for his notable work in connection with the \$130,000 postwar building program planned under his direction.

Mr. Higgins, a member of the architectural firm of Eggers & Higgins, was in charge of the board's postwar building program which has been completed. With his resignation, Mr. Higgins presented to the mayor a 15-page report which he called "An Account of My Stewardship." He outlined reforms made in school planning and pointed to some fine examples of modern school construction already provided for the school children.

► During the past year, due to the retirement of top school officials in Lansing, Mich., extensive changes were effected in the administrative staff of the schools. DWIGHT H. RICH, formerly principal of the Eastern High School, was elected superintendent, to succeed Dr. J. W. Sexton. DR. EDMUND H. THORNE, formerly of Michigan State College, was named assistant superintendent of schools, to succeed Miss Alice Wagenvoord. Mr. LYNN KOSHTY has succeeded H. L. Chamberlain as business manager. New principals include DON WHEELER, who succeeds Dwight H. Rich, HAROLD JACOBSON, who succeeds T. E. Gardner, and MR. MANZ who replaces Don Wheeler at Eastern High School.

► EUGENE L. RARICK has taken over his duties as superintendent of schools at Creighton, Neb., where he succeeds Rex R. Gay.



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Washington News

STATE EDUCATIONAL AGENCIES FOR SURPLUS PROPERTY

As of January 11, 1946, the governors of 36 states had responded to Commissioner J. W. Studebaker's request that they, or the legislatures, establish and maintain a state educational agency for surplus property, with the functions set forth in Educational Surplus Property Memorandum No. 1, to assist eligible public and private educational claimants to obtain such available surplus property as they need and can effectively utilize. It is expected that responses from the other 12 states will be received in the near future.

The governors of 29 states had established a state educational agency for surplus property. These states are: Alabama, Arkansas, Colorado, Connecticut, Delaware, Georgia, Idaho, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Missouri, Montana, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, and Washington. Of these 29 state agencies, the governors designated 18 existing agencies to perform these functions, of which 14 were the state boards or departments of education and 4 were existing over-all state surplus property boards. The governors in 11 states created new state agencies consisting in membership of from 3 to 15 persons representative of public and private educational institutions and instrumentalities and libraries.

Mr. H. S. Alves, director of the Division of Surplus Property Utilization of the U. S. Office of Education, has announced that notices of offerings of surplus materials will be available from 42 regional disposal agency offices, but that certain kinds of property will be made available through national programs, information concerning which will be sent to all state educational agencies. Tentative lists of tax-supported edu-

tional institutions and of nonprofit tax-exempt institutions have been set up through the state agencies. Mr. Alves' office has also available for schools, complete lists of the several disposal agency offices of the Surplus Property Administration of the Reconstruction Finance Corporation, etc.

At the present time, the large city school systems which can send men into the field to discover property, particularly, machinery and tools, which serve their purpose, are at a distinct advantage over the small school systems, which must wait for action through the state departments of education or other state agencies.

LOCAL BUILDING SHORTAGE

Public agitation for the erection of additional school facilities in the District of Columbia has followed the placing of increasing numbers of children on part time. As of January 1, some 7200 children were enrolled in single-session classes.

SCHOOL ADMINISTRATORS TO HOLD CONVENTIONS

Still handicapped by limitations upon travel and living accommodations imposed by wartime conditions, the American Association of School Administrators has trimmed its 1946 convention plans to regional-conference size. The pattern followed in 1944 will be repeated, with meetings held in Kansas City, Mo., Atlanta, New York, and Chicago.

"The Unfinished Task" has been chosen as the theme for the general session programs of the conferences. Adjustments to new needs brought about by the war and its consequences will be the topics assigned to speakers on the programs of the sectional meetings. The provisions of the Surplus Property Act as it affects the disposal of war supplies of educational value to the schools will be considered. Adult education and an expanded educational program for returned war veterans will occupy the attention of the schoolmen.

The administrators will consider the extension of the health and physical education program to all American youth from the earliest year in order to overcome the physical weaknesses in American youth disclosed by the war.

School building programs, which practically ceased during the war period, will be resumed at the earliest opportunity. It is estimated that nearly two billion dollars' worth of school buildings will be required to bring school plants to the point of normal requirements.

New responsibilities of education in international relations will have an important position in the general, as well as the sectional meetings of the conferences. The role of the schools in the UNESCO program will be outlined.

Exhibits of school supplies will be on display in Chicago, at the Stevens Hotel, and in New York, at the Hotel Pennsylvania.

Due to limited hotel accommodations, the association has reserved the right to extend invitations only to individuals who hold 1946 membership cards in the association.

PHYSICAL CARE PAMPHLET

The U. S. Office of Education has announced the publication of a pamphlet entitled, "What Every Teacher Should Know About the Physical Condition of Her Pupils."

This pamphlet, a revised edition of one issued 21 years ago, is intended as a handbook for teachers in protecting and promoting the physical welfare of children in their classrooms. The pamphlet emphasizes the importance of the teacher's position in the health examination service, and stresses the importance of health appraisal.

► HARVEY W. NEUMAN has assumed his duties as superintendent of schools at Webster, S. Dak. He succeeds Frank Gellerman.

► Supt. DELBERT L. AKIN, of Hebronville, Tex., has been re-elected for a three-year term.

► HENRY I. WILLETT, of Norfolk County, Va., has been elected superintendent of schools at Richmond, to succeed J. H. Binford.

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LEGAL DIRECTIVES ON INTERNAL SCHOOL FUNDS

(Concluded from page 60)

atically kept so that a trial balance can be taken and financial statements regularly submitted at periodic intervals. The books should be audited at regular intervals by a competent, disinterested person or committee. One of the functions of auditing is to verify the legality of financial procedures being followed. A minute book for recording student-council actions is very helpful.

As to income it is obvious that school funds should not be deposited in personal bank accounts. A separate bank account should be

opened in the name of the school, the principal, or the officially designated school financial officer who has been either elected or appointed to this office. Legal complications made unduly involved by having too many bank accounts might be solved by having one central treasurer in each building. It is better to keep ledger accounts to indicate the amount to the credit of individual activities rather than to have a separate bank account for each activity.

Cash should be deposited daily when the daily cash receipts are in amounts exceeding \$5 or \$10, or more. Cash remaining on deposit in any one depository — whether demand or

time — should not exceed the amount covered by federal deposit insurance. Treasurers should be adequately bonded, and theft insurance should be provided for money lost or stolen while in transit.

After proper approval all expenditures should be made by prenumbered checks signed by the duly elected student representative and countersigned by the principal, activity sponsor, or other faculty representative. All expenditures should also be supported by a formal invoice from the vendor. Financial papers for the purchase or sale of supplies should be two-name paper issued in duplicate or triplicate. That is, all such papers should require the signature of a student member and a faculty member. Formal, printed, prenumbered forms for tickets, purchase authorizations, and warrants, or orders to pay should be used.

Contracts involving sizable sums of money should be made through the office of the superintendent of schools or the business manager of the school district. Investment of surplus funds might well be made through either of these offices and be restricted to government bonds. Movable equipment should bear some distinctive markings as to ownership on an affixed metal tag, and some system of numbering should be used. An equipment ledger should be kept, and frequent physical inventories should be taken and then compared with the ledger record. Title to all equipment ought to be vested in the school, the school board, or the school district.

The observance of adequate legal directives contributes to the efficient administration of internal school funds. To dismiss the subject by reasoning that the amounts involved are not large enough to worry about is not good reasoning on the part of an educator. To allow an embarrassing situation to arise — regardless of the amount involved — is to furnish an example of inefficient procedures to students and to hurt the cause of education in general.

► FRANK H. FLETCHER, formerly chief buyer for the supply department of the St. Louis board of education, has been appointed as a member of the board of examiners under the new personnel selection system set up by the board for employing noncertified employees. The other examiners are HENRY A. MILLER, in charge of teacher and pupil personnel, and JOHN C. ROSS, acting chief engineer for the building department. The examining board has been given the task of certifying the names of persons making the best grades on examinations for positions open in the school system.

► PHILIP J. CONNELL has been elected business manager for the board of education at Darien, Conn. He will be responsible to the superintendent and the board for all noninstructional activities, except health service, psychological service, and clerical service.

► The board of education at Hartwell, Ga., has reorganized with HENRY E. ETHRIDGE as president, and A. F. GARRISON as vice-president.

► DR. JOHN GRANRUD, originator of the "Springfield Plan" at Springfield, Mass., has accepted an appointment as western division director of the commission on educational organizations of the National Conference of Christians and Jews. He will serve as consultant of school systems in seven states. Dr. Granrud resigned as superintendent at Springfield, Mass., where he brought his plan into being 18 years ago.

► DR. GRAYSON N. KEPAUVER, dean on leave of the School of Education at Stanford University, and a leader in the United Nations Educational Organization, died in Los Angeles, Calif., on January 4, at the age of 45.

► The school board at Fitchburg, Mass., has reorganized with MRS. AGNES D. CASIMAN as vice-president.

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STATES REVISE SCHOOL-BUS STANDARDS

(Concluded from page 53)

in each side. The windows shall provide a glass area at least one-seventh the area of the floor. The floor must be covered with nonskid material and gastight.

It was indicated that reconversion of such vehicles as indicated in the specifications ought to be made for less than \$180 per vehicle.

Action was taken by the conference at its last session to provide for the co-ordination of activities in pupil transportation through the Council of Chief State School Officers.

The conference also requested that the National Commission on Safety Education explore the possibilities of arranging for the preparation and circulation of motion-picture films similar to "movie" newsreels, the same to include school-bus standards and safety regulations.

The conference also favored the collection of information on school-bus accidents on a uniform basis and a study of the problem of school-bus property damage and liability insurance.

The gradual shift from contract to school-owned buses, the continued improvement of both types of equipment, and the potential growth of pupil transportation in the nation as more and more of the 112,000 school districts are reorganized, all combined point toward a program of pupil transportation that will be much more extensive, much safer, and more economical than the present system which holds a good safety record.

CONVENTION CALENDAR

February 4-5. National Association of State Directors of Vocational Education at Buffalo, N. Y. J. E. Nelson, State Director of Vocational Education, Montpelier, Vt., Secretary. Headquarters, Statler Hotel.

February 8-9. Southern Wisconsin Education Association at Madison, Wis. William Marsh, Secretary, Central High School, Madison, Wis. Headquarters, Central High School.

February 13-16. American Camping Association at Boston, Mass. Mrs. Chauncey F. Hulbert, Secretary, 1 Perrin Road, Brookline, Mass. Headquarters, 138 Newberry St., Boston, Mass.

February 22 and 23. The American Education Fellowship, at Chicago, Ill. Limited reservations for hotel accommodations are available by writing to Lester B. Ball, 495 Lincoln Ave., Highland Park, Ill.

March 5-7. American Association of School Administrators at New York, N. Y. S. D. Shankland, 1201-16th St., N.W., Washington, D. C.

March 12-14. American Association of School Administrators at Chicago, Illinois. S. D. Shankland, 1201-16th St., N.W., Washington, D. C.

March 5-7. American Educational Research Association at New York, N. Y. David Segel, Secretary, U. S. Office of Education, Washington, D. C.

March 12-14. American Educational Research Association at Chicago, Ill. David Segel, Secretary, U. S. Office of Education, Washington, D. C.

March 14-16. New Jersey Vocation & Arts Association at Atlantic City, N. J. J. Berilla, Secretary, 549 Corliss Ave., Phillipsburg, N. J. Headquarters, Ambassador Hotel.

March 25-30. North Central Association of Colleges and Secondary Schools at Chicago, Ill. G. W. Rosenlof, Secretary, University of Nebraska, Lincoln, Neb. Headquarters, Palmer House.

March 27-30. Schoolmen's Week at the University of Pennsylvania, Philadelphia, Pa. Theodore L. Reller, 3812 Walnut St., Philadelphia, Pa.

March 28-29. South Carolina Education Association at Columbia, S. C. J. P. Coates, Secretary, 1510 Gervais St., Columbia, S. C.

March 28-30. Oregon State Teachers Association at Portland, Ore. Frank W. Parr, Secretary, 602 Studio Bldg., Portland, Ore. Headquarters, Civic Auditorium.

April 3-4. Florida School Board Association at Tampa.

Fla., James S. Richard, 6 Centennial Bldg., Tallahassee, Secretary.

April 4-6. Illinois Industrial Education Association at Chicago, Ill. Dr. Louis V. Newkirk, Secretary, Board of Education, Chicago, Ill.

April 9-13. American Association for Health & Physical Education and Recreation at St. Louis, Mo. Dr. Ben W. Miller, Secretary, 1201-16th St., N.W., Washington, D. C. Headquarters, Jefferson Hotel.

April 11. Kentucky State School Board Association at Louisville, Ky. L. C. Meece, College of Education, Univ. of Kentucky, Lexington, Ky., Secretary. Headquarters, Brown Hotel.

April 12. Northeastern Wisconsin Education Association at Fond du Lac, Wis. A. M. Bleyer, Vocational School, Oshkosh, Wis., Secretary. Headquarters, Hotel Retlaw.

April 12-13. Indiana Industrial Education Association at Indianapolis, Ind. H. G. McComb, State Dir., Vocational Training for War Prison Workers, 215 State House, Indianapolis 4, Ind., Headquarters, Claypool Hotel.

April 15-18. Association of School Business Officials at Pittsburgh, Pa. H. W. Cramblet, Board of Education, Pittsburgh, Pa., Secretary.

April 17-19. Kentucky Education Association at Louisville, Ky. W. P. King, 1421 Heyburn Bldg., Louisville, Ky., Secretary. Headquarters, Brown Hotel.

April 17-20. Eastern Commercial Teachers Association at New York, N. Y. Bernard A. Shilt, City Hall, Buffalo 2, N. Y., Secretary. Headquarters, Hotel New Yorker.

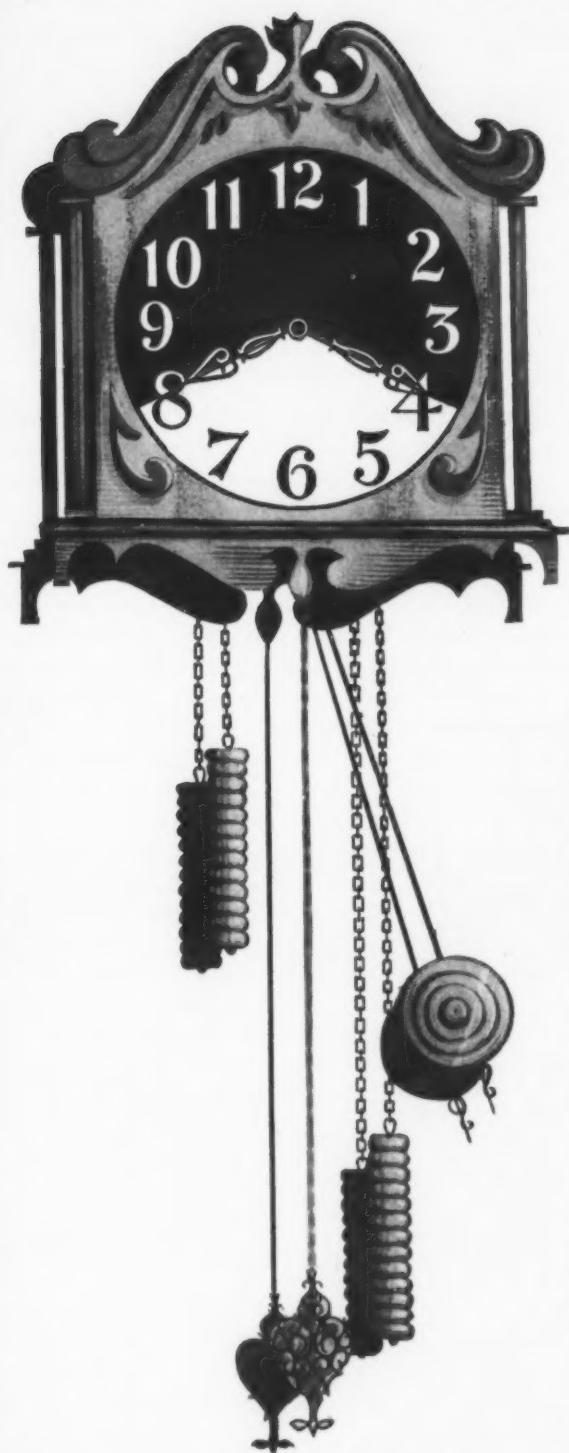
April 18-20. Tennessee Education Association at Nashville, Tennessee. F. E. Bass, 602 Cotton States Bldg., Nashville, Tenn., Secretary. Headquarters, Auditorium and Jackson Hotel.

April 25-27. Michigan Schoolmasters' Club at Ann Arbor, Mich. Leslie A. Butter, Michigan State Normal College, Ypsilanti, Mich., Secretary. Headquarters, Rackham Bldg., Univ. of Michigan.

April 25-27. Eastern Arts Association at New York, N. Y. Mrs. Lillian D. Sweigart, State Teachers College, Kutztown, Pa., Secretary. Headquarters, Hotel Pennsylvania.

April 26-30. International Lighting Exposition at Chicago, Ill. E. H. Huerkamp, 326 W. Madison St., Chicago, Ill., Chairman. Headquarters, Stevens Hotel.

April 26-27. Wisconsin Association of School Boards at Milwaukee, Wisconsin. Mrs. Letha Bannerman, 1200 Highland Park Blvd., Wausau, Wis., Secretary. Headquarters, Hotel Pfister.



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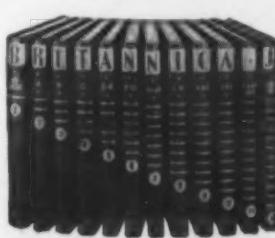
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A DIFFERENT SCHOOL

(Concluded from page 24)

tired. One of the "must" rules is that every counselor and camper must rest, lying down, one full hour after the midday meal and must have a quiet hour before supper.

Emphasis on summer camping has been growing from year to year, and now Calhoun County has branched out to school-year camping, which is designed to widen the living experiences of boys and girls. One of the most important aspects of this program is the taking of children from urban centers to the country. Of 31 children in camp recently, 28 never before had gone for a walk in the woods, Dr. Donaldson reports, adding that this is just one good reason for school-year as well as summer camping.

SCHOOL CHILDREN HAVE BEEN KILLED

(Concluded from page 42)

on the part of the motorist permits him to save the lives of children rather than snuff them out. The New York State public needs to be kept constantly informed of the increased number of school buses on the road during early morning and late afternoon and the necessity for constant vigilance. When violators are prosecuted, it is too late to save the life of the child who has been run down, but such does serve as a warning to all motorists. These accidents and the results of prosecutions should be given wide publicity.

The second accident in New York State this year was caused by an out-of-state truck. Motor-

ists living in neighboring states are potential accident creators because of their ignorance of New York State laws. Publicity campaigns should be styled to help them as well as New York State residents. Such motorists when passing standing school buses should be required to return to New York State for hearings and also be prosecuted if the violations are serious.

The gravity of this whole situation warrants active vigilance on the part of enforcing officers and a great deal of consideration and emphasis on the part of judicial officials. These judicial officials are in an advantageous position to give the right kind of warning to all motorists and to provide a constructive kind of penalty to those who have violated this law, whether or not children have been killed.

SPELLING AT THE HIGH SCHOOL LEVEL

(Concluded from page 31)

Relating Reading and Speaking to Spelling

With no thought of drilling him on all words in reading assignments which may be difficult for the student when he wishes to use them in written reports, but rather with the aim of developing in him the habit of concentrating on the spelling, as he reads, of some of the words he commonly misspells, certain members of the committee experimented with integrating spelling instruction with reading and speaking activities. They paired the members of their English classes, making each member of each pair responsible for encouraging, assisting, and checking his partner in conquering spelling difficulties. From time to time, partners were given an opportunity to select from the reading and oral work of the class certain demons for their buddies to write on the board. The teachers contend that this attention to spelling in connection with reading and oral work tends to make poor spellers more spelling conscious—more attentive to their own spelling demons which they may encounter frequently

in their reading and more likely to attempt to visualize them as they speak them. However, committee members were careful to avoid putting so much emphasis on spelling that the minds of the students became distracted from the thought and ideas expressed in the reading materials and in the class discussions. They aimed to devote only enough attention to spelling to develop in the student the habit of analyzing, and attempting to write, words that might be difficult for him to spell.

In Summary

The Chicago spelling committee has attempted to make the student at the high-school level spelling conscious; to motivate him to spell correctly every word in his written work; to consult the dictionary for the correct spelling of any word which shakes his confidence in his spelling ability; to integrate the teaching of spelling with the language-arts activities—writing, reading, speaking, and listening; to train students in the use of techniques for helping themselves in word analysis and the mastery of spelling; and to stimulate the English department in each high school to attack, on a united front, the spelling problem, enlisting where possible the support of all members of the faculty.

PERSONAL NEWS OF SUPTs.

- JOSEPH C. WAGNER, of Hartford City, Ind., has accepted the superintendency at Crawfordsville.
- W. L. HOLLAND has been elected superintendent of schools at Fulton, Ky., to succeed J. O. Lewis, who has taken a similar position at Mayfield.
- GEORGE STRINGER has been elected high-school counselor at Rochester, Mich.
- BYRON B. COLES, superintendent of schools at Trenary, Mich., died in a Marquette hospital.
- JOHN W. HOLDEN, of Gosport, Ind., has accepted the superintendency at Rockport.
- EUGENE L. RARICK has been elected superintendent of schools at Creighton, Neb., to succeed Rex R. Gay, who has accepted a position with a business firm.

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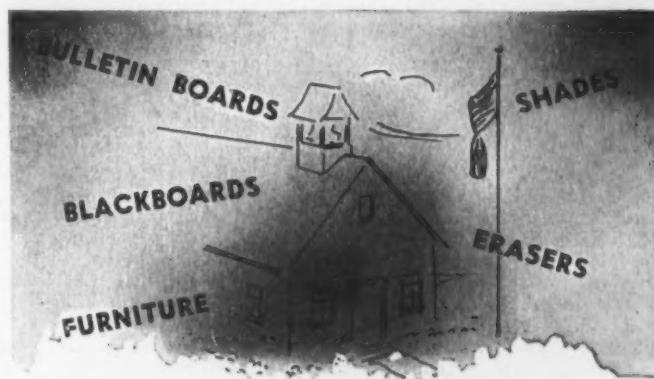
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NEW B-H CAMERA LENS

A new 0.5 F2.8 lens has been announced for the 8mm. Companion Camera, manufactured by Bell & Howell.

In addition to the standard F stops, another scale has been added. A stationary run is calibrated into two divisions, for "Winter" and "Summer." A movable run is divided by three lines marking bright, hazy, and dull. The lens has a speed of F2.8, which represents a great improvement. The lens marking has been developed to dispel the mystery surrounding F stops.

Bell & Howell Co., 7100 McCormick Road, Chicago 45, Ill.

For brief reference use ASBJ-215.

OFFER NEW SOUND EQUIPMENT

A new and improved line of sound equipment for 1946 has just been announced by the Western Sound & Electric Co. The list includes centralized and portable public-address systems, recording, and intercommunicating equipment—all developed to be outstanding in appearance and quality of reproduction.

Western Sound & Electric Co., Milwaukee 3, Wis.

For brief reference use ASBJ-216.

NEW MULTI-MATIC ACCOUNTING METHOD

A new method of accounting and pay roll preparation, called the Multi-Matic method, has been announced by the Remington-Rand Co. Devised by Mr. Rolf Hurup, the system is applicable to small and medium size business and to branch office accounting in large organizations.

Multi-Matic accounting has been developed for the specific purpose of making more complete and useful financial and statistical reporting. It provides a daily and period-to-date financial statement, but requires no skilled accounting help. It permits similar multipurpose entries in general ledger accounting, and the triple check, color matching, and position matching made on each posting makes erroneous distributions practically impossible.

Information regarding Multi-Matic Accounting is available through any branch of Remington Rand, Inc., Systems Division, or from the Systems Division, 315 Fourth Ave., New York 10, N. Y.

For brief reference use ASBJ-217.

NEW GLASS BEADED PROJECTION SCREEN

A glass beaded projection screen has recently been developed and marketed by Radiant Mfg. Corp., to provide a screen for brighter and clearer motion pictures. The glass-beaded screen, with its high-reflecting qualities, has been proven most useful for reflecting the greatest amount of light and giving pictures maximum brilliance and depth.

Radiant Mfg. Corp., Chicago 22, Ill.

For brief reference use ASBJ-218.

ANNOUNCE 1946 NATIONAL SCHOLARSHIP COMPETITION

For the ninth successive year, the George Westinghouse Scholarship Contest for all senior high school students has been announced by The Westinghouse Electric Corp., 306 Fourth Ave., Pittsburgh 30, Pa.

Ten co-operative work-and-learn scholarships will be awarded for engineering education at the Carnegie Institute of Technology. The co-operative courses require five full years of work, with eight semesters spent in school, and two years devoted to practical experience in Westinghouse plants. The scholarships are each worth \$1,850, plus two years of wages earned during the working periods.

The 10 awards will be given on May 6 and the winners will begin their studies in June.

BRITANNICA FILMS AVAILABLE

A new plan to make Encyclopedia Britannica classroom films available to schools on a rental basis has been announced for March, 1946. The distribution method is limited for the present to the states of Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, and Wisconsin. Approximately 9500 prints of classroom films have been placed in the Britannica Library in Chicago to serve schools in the first seven states.

Encyclopedia Britannica Films, Inc., 20 North Wacker Drive, Chicago 6, Ill.

For brief reference use ASBJ-219.

NEW CATALOG OF S.V.E. EDUCATIONAL PICTURES

The new pictorial catalog of 813 educational film subjects, many new or revised, just announced, is the first postwar catalog of S.V.E. film subjects and includes subjects for use in school classes. Of particular interest to teachers in primary grades are two revisions of "Little Black Sambo" and "Little Black Bear," for teaching reading in the lower grades. The reading matter, alternated with the pictures, is keyed to the Thorndike word list for the second and third grades.

Society for Visual Education, 100 East Ohio St., Chicago, Ill.

For brief reference use ASBJ-220.

NEW FILMO SOUND FILMS

Among the new additions to the Filmo Sound Library are the following:

Moonlight and Cactus, 6 reels.

In Society, 7 reels.

Dance Revival-India.

Bell & Howell Co., 1801 Larchmont Ave., Chicago 13, Ill.

For brief reference use ASBJ-221.

YOUNG AMERICA FILMS

Among the films announced by Young America Films, Inc., are the following:

Expression in Art and Fundamentals of Art (elementary grades).

Commercial Art (senior high schools).

Chemistry in Industry (senior high schools).

Federal, State, and Municipal Government (junior high schools).

Grammar and Sentence Construction (elementary grades).

Global Geography and Map Study (junior high schools).

Early American History and Biographies of American Leaders (elementary schools).

United States History and Latin American History (elementary schools).

Plane Geometry (senior high schools).

Young America Films, Inc., 32 East 57th St., New York 22, N. Y.

For brief reference use ASBJ-222.

ITTCO FILMS FOR PHYSICAL EDUCATION

The International Theatrical and Television Corp., has just announced three new one-reel short subjects for use in physical-education classes. The subjects are entitled *Swimming for Beginners*, *Advanced Swimming*, and *Swimming and Diving*. The films are made in kodachrome and have a running time of eight minutes.

International Theatrical and Television Corp., 25 West 45th St., New York 19, N. Y.

For brief reference use ASBJ-223.

NEW DIRECTOR APPOINTED FOR VICTOR CORPORATION

Lincoln V. Burrows, formerly chief of the photographic section of WPB, has been named director of distribution for the Victor Animatograph Corp., at Davenport, Iowa. He was associated with the Eastman Kodak Co. from 1935 to 1942, and was with WPB from April, 1942, to October, 1945.

AAA ISSUES REPORT ON MAPS

A report on maps, map series, and service has been released by a committee of the American Library Association, for use in connection with

its October, 1945, issue of *Subscription Books Bulletin*. The committee has evaluated the maps from the standpoint of their interest to the library. A majority of the series is intended for classroom use in such subjects as history, geography, and social studies.

American Library Association, 520 North Michigan Ave., Chicago 11, Ill.

For brief reference use ASBJ-224.

ARMY REPORT ON PICTORIAL SERVICE

The effectiveness of films in creating interest and training for specific skills has been revealed in the reports issued in Army Pictorial Service issue of the *Business Screen Magazine*, prepared by officers of the Army Pictorial Service of the signal corps. A wealth of statistics, testimonials, and observations is presented showing the use of motion pictures and slide films in the training of fighting units. The task of getting across the message of the various military techniques to millions of troops was accomplished with significant success by the Army Pictorial Service. *Business Screen, 157 East Erie St., Chicago 11, Ill.*

For brief reference use ASBJ-225.

SCHOOL BONDS

During the month of December, 1945, sales of permanent school bonds were recorded in the amount of \$26,167,950. The average rate of interest for municipal bonds, as of December 31, was 1.51 per cent. The sales in California amounted to \$19,076,000. Short-term paper sales were \$969,500.

SCHOOL-BUILDING CONSTRUCTION

The Dodge reports indicate that, during the month of November, 1945, contracts were let in 37 eastern states for 102 educational buildings, with a valuation of \$7,015,000.

ACQUIRES SURPLUS PROPERTY

Up to January 1, 1946, the New York City schools acquired army surplus materials valued at \$1,164,152, at a total expenditure of \$17,174. Most of the outlay for the material represented the cost of packing and transportation. The articles included radio tools and parts, aircraft parts, drills, lathes, hand tools, benches, welding machines, milling machines, drill presses, gauges, etc.

TEXTBOOK SHORTAGE TO CONTINUE

The past three years have been difficult, troublesome years for the schools of the nation. Shortages of trained teachers, of school supplies and equipment, and even of basic textbooks have plagued administrators and teachers in carrying out the educational program. It is now evident that the teacher shortage will be the first of these to be relieved.

Textbook publishers have expressed their appreciation of the co-operation of schools in getting orders in early and for the patience that teachers and administrators have shown with delays in the receipt of orders. The publishers believe that school people have realized the difficulties under which all publishers worked during the war.

Unfortunately, the recent removal of governmental restrictions on paper and cover cloth does not mean that textbooks will become immediately plentiful. A recent survey indicates that there will be shortages of paper, cover cloth, skilled labor, and new machinery to replace wornout machinery, throughout 1946.

In other words, manufacturing conditions beyond the publishers' control will still exist for months to come. The textbook publishers hope, therefore, that school administrators and teachers will continue to get their book orders in early, well ahead of the time when the books are needed in the classrooms, and that they will continue to be patient over delays in receiving books that have been ordered.

► Pasco, Wash. A four-room addition to the high school has been completed and occupied. It houses three seventh grades and one high school class. Four elementary classrooms will be needed by next fall and a summer building program is being planned.

After the Meeting

Acquired Polish

Asked if a year of college had made any difference in his eldest son, a deep-South farmer reflected: "Well, he's still a good hand with the plow, but I notice his language has changed some. It used to be, 'Whoa, Becky! Haw! and Git up!' Now, when he comes to the end of a row, he says, 'Halt, Rebecca! Pivot and proceed'!" — *Progressive Farmer*.

Self-Stoker

In English III the fat student was a complete failure.

"I declare, young man," complained the professor, "your body seems to be far better nourished than your mind."

"That's easy to understand, sir," the fat boy replied, a malicious glint in his eye. "You feed my mind, professor, but I feed my body!" — *Wall St. Journal*

A Modern

Teacher: "When you grow up, I'm sure you'd like to possess certain good qualities, such as truth, honesty — and what else?"

Bright Boy: "Sales resistance." — *Atlanta Two Bells*.

EDUCATION AND GOOD CHOICES

"Educated men and women have learned to make good choices. They have learned how to separate the gold from the dross when choosing the ideas and the ideals to which they will be loyal. They make better choices of the activities in which they participate; better choices of the music to which they listen; better choices of the drama which they enjoy; better choices of the literature and art which they applaud; better choices of the people whom they elect; and better choices of the battles which they fight. Education should enrich our living not so much because it provides a series of interesting and worth-while experiences, but because in the course of such experiences, it teaches us to know what experiences are worth having. That purpose in education is eternal. It is the core of all hopes for human betterment." — Pres. Edwin B. Fred, University of Wisconsin.

Not So Dumb

A certain industrialist relates with understandable glee how, when his father took him to college, the older man said to the president of the institution, "Frankly, I don't know whether to enter my son in college or not. Won't you try to draw him out and tell me what you think?"

Accordingly it was arranged that the proxy take the lad for a walk and try to plumb his possibilities. After the pair had walked a little while the youth ventured: "Fine day, Professor."

"Yes," replied the educator.

Then minutes later, the young man, visibly embarrassed blurted out, "This is a pleasant walk, Professor."

"Yes."

Another long silence, and the young man ventured, "Looks like rain, doesn't it?"

"Yes," said the professor, but this time he sternly added, "Young man, we have been together half an hour and you have said nothing which was not stupid and commonplace."

"Yes," rejoined the boy with some heat, "and you endorsed every single word I said."

"You'll do, young man," the professor announced.

History Lesson

Teacher: "Johnny, who was Anne Boleyn?"
Johnny: "Anne Boleyn was a flatiron."

Teacher: "What on earth do you mean?"
Johnny: "Well, it says in the history book, Henry, having disposed of Catherine pressed his suit with Anne Boleyn." — *Montreal Star*.

Exceptions

"Have you any abnormal children in your class?" a harassed-looking teacher was asked.

"Yes," she replied, "two of them have good manners." — *The Wyatt Way*.

Guide to Products and Services

Advertisers in this index are given a code number in addition to the page number on which the advertisement appears. Refer to the advertisement for product or services available. Write direct to advertiser or use the coupon in requesting information from a number of advertisers.

Code No.	Page No.	Code No.	Page No.
20 Allyn and Bacon	4th Cover	238 Johns-Manville Corp.	Insert between 67 & 70
21 Aluminum Co. of America	67	239 Keweenaw Mfg. Company	96
22 American Radiator & Standard Sanitary Corp.	15	240 Medart Mfg. Company, Fred	9
23 Ampro Corporation, The	79	241 Merriam Company, G. & C.	90
24 Automatic Pencil Sharpener Co.	84	242 Minneapolis-Honeywell Regulator Co.	3rd Cover
25 Bay West Paper Company	82	243 Minter Homes Corp.	16
26 Beckley-Cardy Company	90	244 National Cash Register Company	61
27 Billmyre Company, Allen	11	245 National Lock Company	16
28 Binders Board Manufacturers	94	246 National Time & Signal Corp.	73
29 Boone Public Schools	98	247 Nesbitt, Inc., John J.	20
210 Bristol-Myers Company	93	248 Neumade Products Corp.	99
211 Bruce Publishing Company, The	97	249 Norton Company	10
212 Castle Films, Inc.	83	250 Pan-American Band Instrument Co.	4
213 Clarin Manufacturing Company	74	251 Peabody Company, The	71
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215 Continental Car-Na-Var Corp.	19	253 Professional Directory	12
216 Crane Company	6	254 RCA Victor Div. Radio Corp. of America	59
217 Delta Mfg. Company	Insert between 16 & 19	255 Readers Digest	64
218 DeVry Corporation	88	256 Rowles Company, E. W. A.	99
219 Dick Company, A. B.	5	257 Royal Metal Mfg. Co.	97
220 Ditto, Incorporated	85	258 Schermerhorn Teachers Agency	12
221 Dolge Company, C. B.	99	259 Sengbusch Self-Closing Inkstand	4
222 Dudley Lock Corporation	98	260 Sheldon & Company, E. H.	78
223 Edwards & Company, Inc.	70	261 Sloan Valve Company	1
224 Encyclopaedia Britannica Films, Inc.	87	262 Speakman Company	8
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The advertisements in this issue have been given a code number for your convenience in requesting information on products, services, booklets, and catalogs offered. Encircle the code number of the advertisement in which you are interested, clip and mail the coupon to THE AMERICAN SCHOOL BOARD JOURNAL. Your request will receive prompt attention. BRUCE-MILWAUKEE.

THE AMERICAN SCHOOL BOARD JOURNAL

540 North Milwaukee St., Milwaukee 1, Wis.

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Name Please Print

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Hats off to the Sprats!

Jack and his wife licked the platter clean—as a result of *specialization*.

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